JOURNAL of MAINE EMS

OCTOBER 2007

INSIDE:

BY JAY BRADSHAW, EMT-P
DIRECTOR MAINE EMS

Making a Difference

How many times have people who know you are involved in EMS ask, "What do you do?" Save a life? Maybe, but rarely. Make a difference? Daily.

That we make a difference may seem like a minor thing to some. Certainly not as dramatic sounding as "saving a life", or is it?

Many years ago there was an editorial published in JEMS about the "Save a Life Myth". It's been long enough now (maybe 20 years?) that I can't recall the author, but I remember the letters written in response.

Many people were adamant that they did, in fact, save lives – and much like the stories where a jawbreaker and an EOA were claimed to be effective airway management, the "save a life" responses were anecdote, not data. I know there are calls where this is what has happened, and in my career I have been fortunate enough to experience that first hand.

But out of hundreds or thousands of calls, how many really "saved a life"? Very few. And for many people with long and successful careers in EMS, the answer could be "none".

Does that mean that EMS doesn't matter? Not at all. It just means that we need to regularly take a look at what we do and how we affect our patients, our community, our system, and each other.

"Making a difference" may sound like one of those "feel good" expressions from a previous decade, but it's more than a flower power leftover. It's who we are, and it should be our mantra.

Making a difference is not limited to years of service, license level, service area, gender, or anything other than our willingness to do so.

When I think about examples of those I know who have made a difference, I think about the paramedic from Portland who recognized that someone living alone was lonely and hungry, and helped them fix a simple meal - and the paramedic from Augusta who is an accomplished pianist and played a song for a widow that reminded her of the music to which she and her late husband once danced - and the First Responder from central Maine who stayed at the scene to call family members about a loved one who was on his way to the hospital. The stories are endless, and those who make a difference are all around us.

Making a difference in our state/region/community is one of the things that keep me excited about this job.





Journal of Maine EMS

Published quarterly for the Maine Emergency Nurses Association, the Regional EMS Councils, Maine Chapter of the American College of Emergency Physicians, Maine Committee on Trauma, Maine Ambulance Association, and the State of Maine EMS.

Published by Slingshot Multimedia
PO Box 154, Rockland, ME 04841, 207-551-3753
Melissa Arndt, Owner and Art Director
melissa@slingshotmultimedia.com

Printing and mailing provided by Lincoln County Press in Newcastle, Maine.

Advertisements for products and services contained within the Journal of Maine EMS are not intended as endorsements by the publisher or by the organization sponsoring the Journal.

Cover photos by Cathy Case and Sharon Bray.

Another part is the way we can make a difference to each other.

Early the morning of July 5, a drunk driver drove through a stop sign and into the path of an ambulance that was transferring a trauma patient to Central Maine Medical Center. The driver, Arlene Greenleaf, was seriously injured as was the patient being transferred. Paramedic Allan Parsons was killed.

The following week a celebration of the life of Allan Parsons was held in Farmington. It was a beautiful summer day and people from all over Maine, NH, Massachusetts, and Canada came to pay their respects to one of our own.

Later that same month, five people (3 providers and 2 patients) were killed in Ohio when their ambulance collided with a tractor-trailer and burst into flames.

In September, Dr. Nadine Levick made presentations in Lewiston and Bangor on ambulance safety. Dr. Levick, is an emergency physician and researcher who has been a national leader, and sometimes lone voice, about the hazards of ambulance transports – and of those boxes in which we work and carry our patients.

The figures are sobering and unnerving. Did you know that there are ~ 5,000 ambulance crashes each year in the U.S. That there is a fatality every week and 10 serious injuries every day? Or that the crash/fatality rate per capita is 35 times higher in the U.S. than in Australia? Or that each year, one in every 300 ambulance services experience a fatality? (source: www.objectivesafety.net)

Did you also know that ambulances are exempt from federal automotive research and safety requirements because the patients and the attending provider are considered cargo?

We have taken some important steps toward safer transportation by requiring Ambulance Vehicle Operator training and by securing items such as monitor/defibrillators, oxygen tanks, and scissors – but we need to do much, much more.

82% of fatally injured EMS rear occupants were unrestrained. And before you think that a simple seat belt while you're riding on the squad bench is the answer – think again. Dr. Levick has an impressive video with crash test dummies who are secured in 4 point restraints while sitting sideways on a squad bench. Think for a minute about being that provider traveling down the road at 50 mph and coming to a crash stop (and remember Newton's law about an object in motion remaining in motion until acted upon by an outside force). Now think about that object staying in motion being your 10 pound head snapped sideways while your torso is secured to the side wall. Not a pretty sight.

Fortunately, we know the problems and we know the answers. It will take all of us, and more, if we are to make a difference in this area. But how can we continue to ignore the data and tolerate anything less than 100% safety for our patients and for each of us?

Please think about it – and be careful out there. See you in a few months.

A Case Of: IPF

The Patient:
The local ambulance crew calls in on the radio to the hospital and reports that they are transporting an 81 year old female that was found at home, extremely short of breath. En-route to the hospital, the patient has had an IV started, Albuterol by nebulizer, and is currently on 15 LPM of oxygen by non-rebreather mask. The crew gives the latest set of vitals including rapid shallow respirations and has a 5 minute ETA. The patient's respiratory status has not improved with the treatments provided. The emergency department contacts the respiratory therapist on duty and has him come down to the ED to be available to help with the incoming patient.

The lady is pale, anxious, and using every available muscle to help move air. As the patient is switched over to the hospital's equipment she gasps, "I can't breathe."

The patient arrives in the Emergency Department sitting bolt upright on the stretcher, on oxygen, in extreme respiratory distress. The lady is pale, anxious, and using every available muscle to help move air. As the patient is switched over to the hospital's equipment she gasps "I can't breathe". The respiratory person has set up an Albuterol treatment in a non-rebreather mask and applies it to the patient's face. The therapist reassures the patient that the medicine will help. The patient again gasps "I need air". A nasal canula at 6 LPM is added under the mask. The patient's pulse oximetry is reading 70. The patient's respirations are rapid and shallow at a rate of 45 – 50.

The emergency department doctor has the respiratory person set up the BIPAP machine and switches the patient over to a new mask and tells the patient not to fight the machine, let it help with her breathing. Within a few minutes the patient's breathing starts to slow and her oxygen saturation begins to improve into the 70's. When her saturation reaches the low 80's she is calm enough to complain that the mask does not fit correctly. The therapist finds a smaller mask and adds a nebulizer to it so that she can resume the Albuterol treatment. With the Albuterol and the bi-pap, the patient's oxygen saturation reaches the upper 80's. The patient is now settled enough that the ED staff can obtain a patient history.

The patient is found to have a history of respiratory disease; pulmonary fibrosis.

The Disease:
'Pulmonary fibrosis is a group of disorders characterized by accumulation of scar tissue in the lung interstitium, resulting in loss of alveolar function, destruction of normal lung architecture and respiratory distress'.[1] It is also referred to as Idiopathic Pulmonary Fibrosis (IPF) in many writings. The term idiopathic is used often when the exact cause of the disease is not clearly understood. The American Lung Association lists IPF under a more global heading of Interstitial Lung Disease (ILD). There are between 130 and 200 diseases listed under the heading of ILD. I found the American Lung Associations description of the disease process the easiest to follow.

'There is one common link between the many forms of ILD. They all begin with an inflammation. The inflammation may affect different parts of the lung:

1. The walls of the bronchioles (Small airways). When inflammation involves the bronchioles, it is called bronchiolitis.
2. The walls and air spaces of the alveoli (air sacs). When inflammation involves the alveoli is called alveolitis.
3. The small blood vessels (capillaries) of the lungs. When inflammation involves the small blood vessels it is called vasculitis.

Inflammation of these parts of the lung may heal or may lead to permanent scarring of the lung tissue. When scarring of the lung tissue takes place, the condition is called pulmonary fibrosis.'[2]

The Pulmonary Fibrosis Foundation also notes that IPF may be an autoimmune disorder or related to a defective gene that has been found in the families of patients with a history of pulmonary fibrosis. Pulmonary fibrosis has also been linked to:

- Exposure to inhaled toxins
- Cigarette smoking
- Radiation treatments
- Rheumatoid Arthritis, Lupus, Sarcoidosis
- Certain medications

Again, this points out that there is not a clear known cause for this disease. Research is ongoing on many fronts to better understand the disease and to find an effective cure.

It is estimated that five million people world wide have this disease and 200,000 of these people live in the United States. Over 40,000 of these people will die in the next year from pulmonary fibrosis. Breast cancer claims about the same number of people each year.

The disease is often first noted in both males and females between the age of 40 and 60. The signs and symptoms of IPF include:

- Shortness of breath
- Fatigue
- Weakness
- Cough

These signs and symptoms are often similar to those experienced by asthma, COPD, pneumonia and other lung diseases. Pulmonary fibrosis is often initially misdiagnosed in many patients. Also, early in the disease process the signs and symptoms are so mild that they may go unnoticed by the patient. Extensive testing, using a variety tools and techniques, allow the pulmonologist to reach a diagnosis of pulmonary fibrosis.

There is no common progression for the disease. For some individuals the disease process is very slow, with periods where the disease stabilizes for a short time. For others, the disease rapidly spreads throughout the lungs. As the disease progresses, the patient will become breathless with less and less exertion. Eventually even talking will be difficult.

Patients with pulmonary fibrosis will usually die within 3 – 6 years of diagnosis. This is in part due to the difficulty in diagnosing the disease. Patients who are diagnosed early in the disease process may live for a much longer time.

Treatment:
The treatment options are very limited. Initial treatment for Pulmonary Fibrosis can include corticosteroids for any lung inflammation. The steroids, along with other medicines, have been shown to have very limited value in stopping the progression of the disease. As mentioned earlier, there is ongoing research on many fronts including new medicines to try to help fight this disease. Also, patients will be urged to have influenza and pneumonia vaccinations to try to prevent other lung related issues.

Some patients may be a candidate for a lung transplant, but this does not happen often due to the patient's age, overall health and the limited availability of transplant organs.

'Pulmonary rehabilitation has become the standard of care for people with lung disease.'[3] Pulmonary rehab can include more physical exercise, breathing exercises, smoking cessation, improved eating and weight management, and support group therapy. People with lung disease mistakenly think that taking it easy is better for their lungs; when in fact maintaining lung function through exercise is far better for them. Eventually these patients will progress to needing at home oxygen support as their lung function declines.

Field Treatment:
As noted earlier, these IPF patients will present with signs and symptoms consistent with many respiratory illnesses. The patient's oxygen saturation will probably be very low since they have been living with the disease for a while. It is likely that they will wait until they are in extreme distress before they call. You will not be able to tell if the patient has COPD or a pulmonary fibrosis from the patient's signs and symptoms—only the patient will be able to tell you. In either case your current treatment remains the same, high flow O2, Albuterol, and an IV. It may become necessary to help ventilate these patients with a bag valve mask, or an ET tube. Since there is no cure for IPF, it would be prudent to check for a DNR order with these patients.

Pulmonary fibrosis patients will also be candidates for CPAP. CPAP (Continuous Positive Airway Pressure) in the pre-hospital setting is currently in the trial stage in the State of Maine. CPAP has been in use for over 30 years in the hospital setting and has been used for many years in homes for patients with sleep apnea. Many states have already adopted CPAP for use in the field for patients in respiratory distress. CPAP works by providing a continuous level of pressure to the lungs through an airtight mask. It is referred to as non-invasive ventilation, ventilation techniques that do not involve an endotracheal tube. CPAP helps keep the airway and the alveoli open and can help move medications deeper in to the lungs. In addition to the COPD type illnesses, CPAP has also been proven to helpful with patients in pulmonary edema. There is a helpful article on the internet by a paramedic that describes when to use CPAP. The article says:

CONTINUED ON NEXT PAGE

'Have you ever found yourself with a patient in respiratory distress who keeps getting worse? The oxygen is cranked as high as it will go and you've given all the drugs your protocol allows, but your patient can't hold their head up anymore and the hospital doesn't seem to be getting any closer. The non-rebreather mask or nebulizer just isn't cutting it and you ask yourself how much worse you'll let your patient get before you intubate them.'[4]

CPAP is a tool that will fill the gap for patients are not responding to a non-rebreather but are still conscious and not ready for a tube. Many studies have been done that demonstrated that CPAP actually reduces the need for ET tubes in patients and can improve (reduce) the mortality rate in patients. CPAP increases patients' oxygen levels and reduces their work of breathing. There are only a few contraindications for CPAP; respiratory arrest, pneumothorax, and a tracheostomy.

If your respiratory distress patient has used CPAP before, perhaps in a hospital setting, they may ask if you have it on the truck. For most people it will be a new and somewhat frightening experience. The EMT will need to explain what the mask is and how it will help. Remember CPAP requires a tight seal on a patient's face when they feel like they cannot breathe. Be prepared for them to try and remove the mask before it has a chance to help. It will also take a few breaths for the patient to adjust to the air pressure. One article described using CPAP as 'breathing with your head stuck out of a moving car.[5] Remind the patient that they can breathe normally; sometimes it helps to tell them to inhale through their nose and exhale through their mouth. Most masks have the ability to attach a nebulizer so that breathing treatment can occur concurrently.

Hospital Treatment:

As mentioned earlier in the paper, when the patient arrives at the hospital it is likely that the patient will be switched to a BIPAP mask and machine. 'BIPAP delivers CPAP but also senses when an inspiratory effort is being made and delivers a higher pressure during inspiration.'[6] This use of BIPAP further reduces the effort of breathing for the patient. Like CPAP, studies have shown that avoiding intubation can improve patient outcomes. So why not use BIPAP in the field? Well one reason is that a BIPAP machine will cost thousands of dollars, where CPAP has now been refined to the point that the CPAP mask can run of the oxygen tank in the truck.

Unfortunately ventilation support is all the hospital can do for the pulmonary fibrosis patient. When BIPAP is no longer effective, an ET tube can be used. The patient that came in to the ED was advised by the doctor that she may need to be intubated and the patient stated that she did not want that treatment to be done to her. As noted earlier there is no cure. The 81 year old lady had already survived longer than most people with the illness. She was admitted to the hospital with a diagnosis of end stage pulmonary fibrosis.

Footnotes:

1. The Role of PPAR's in Lung Fibrosis, Lakatos HF, Thatcher TH, Kottmann RM, Garcia TM, Phipps RP, Sime PJ. Department of Environmental Medicine, University of Rochester, NY
2. American Lung Association, Interstitial Lung Disease and Pulmonary Fibrosis. Web site, September 2007.
3. Patient Information Handbook, Pulmonary Fibrosis Foundation, 2004 – 2006.
4. CPAP: An EMT User Guide, Robert Sullivan NREMT-P, MERGINET May 2006.
5. Use of CPAP and BIPAP in Acute Respiratory Failure, Scott Rappard, found at Pub Med on the Web. September 2007
6. Use of CPAP and BIPAP in Acute Respiratory Failure, Scott Rappard, found at Pub Med on the Web. September 2007

References

1. The Role of PPAR's in Lung Fibrosis, Lakatos HF, Thatcher TH, Kottmann RM, Garcia TM, Phipps RP, Sime PJ. Department of Environmental Medicine, University of Rochester, NY
2. American Lung Association, Interstitial Lung Disease and Pulmonary Fibrosis. Web site, September 2007.
3. Patient Information Handbook, Pulmonary Fibrosis Foundation, 2004 – 2006.
4. CPAP: An EMT User Guide, Robert Sullivan NREMT-P, MERGINET May 2006.
5. Use of CPAP and BIPAP in Acute Respiratory Failure, Scott Rappard, found at Pub Med on the Web. September 2007
6. CPAP Protocol, Rommel O. Bote, MD Racine Area EMS, February 2005
7. What is Idiopathic Pulmonary Fibrosis, University of Pittsburg, Simmons Fund for Idiopathic Pulmonary Fibrosis, 2006
8. Non-Invasive ventilation, Masip, J Heart Fail Rev, June 2007 on Pub Med Web site.

CEH : Coronary Heart Disease/Heart Attack : July 2007

Credits: .5 cat 2 BLS Topics .5 Cat 4 ALS Topics : Listed by License Number

21168	9087	9096	22041	19760	15459	12094	12720	23353	12270	21188
17046	12215	13058	15362	10272	15462	19663	13801	23341	6236	21813
8852	5635	12274	14768	10236	15420	21655	19032	5501	23259	17222
20480	18970	23273	17365	22170	21077	7004	23413	14466	13942	11575
17315	17632	22866	17912	17849	13137	20709	15677	22252	12216	
16813	17439	3731	19172	19730	23005	22943	19530	22251	21651	
22724	11274	21274	19516	21932	4660	1380	20668	12269	23249	

CEH Corner

Once you have finished reading and understanding this issue's article on Pulmonary Fibrosis, you can complete the following 5 questions which pertain to the subject matter. Submit your answers and mail to MEMS Journal, K Roderick, 141 Fairfield Street, Oakland, Maine 04963, or email directly to kr8264@gmail.com
Your completed questions must be received no later than November 9, 2007 to receive your 1 hour CEH credit. (0.5 Cat 2 BLS topics and 0.5 Cat 4 ALS Topics).

1. What is the definition of idiopathic pulmonary fibrosis?

2. What are the signs and symptoms of IPF?

3. What is the life expectancy of a patient diagnosed with pulmonary fibrosis?

3. How does CPAP work?

3. What is the difference between CPAP aand BiPAP?

New EMS Education Standards on the Horizon

Daniel Limmer
York County Community College EMS Programs

New EMS education standards are on the horizon—albeit a distant horizon.

Scheduled to be released by the National Highway Traffic Safety Administration in late 2008 or early 2009, the new EMS education standards will change some things in EMS—and likely leave other things the same.

Before this article progresses there are a few important notes and disclaimers:

- These are education standards developed on the federal level.
- The standards are currently being revised to the second draft.
- States will require additional time to adopt these standards—if they choose to adopt these standards.
- There are a wide variety of opinions on the standards and what they mean to EMS. Please become involved, read the documents and form your own opinions.
- Don't be alarmed by anything you read—be informed. Many of the issues mentioned will work themselves out over the years until the new standards are adopted.

Following the EMS Scope of Practice document, the revised standards will outline education of four levels of EMS provider:

Current EMS Providers	Providers in the New Education Standards
First Responder	Emergency Responder
Emergency Medical Technician-Basic	Emergency Medical Technician
EMT-Intermediate	Advanced EMT
Paramedic	Paramedic

The first draft for all of the standards may be downloaded at www.nemses.org. In addition to several changes in the scope of practice and names of the EMS providers of the future, there are several other implications to the new standards.

The standards are just that, standards. They are not designed to be a curriculum. What is the difference, you ask?

Curricula are looked at as much more prescriptive. As a matter of fact the 1994 EMT curriculum is quite outdated. It doesn't include pulse oximetry, still recommends restraining violent patients face down and doesn't keep up with practice—such as epinephrine auto-injectors at the EMT level. The standards are envisioned as more of a living document; less prescriptive and allowing changes in practice. Which leads us to point two:

If the standards don't give exact guidelines, how will classes be the same from course-to-course and state-to-state?

The 1994 EMT curriculum has a significant "declarative" (outline) section. This was used to identify content, scope and depth (although it

Photo by Sharon Bray

was only intended to be a guideline, not the final word). The new education standards in the first draft have a less prescriptive content outline approach. It has yet to be determined how this will flesh out in subsequent drafts.

Even more interesting, there will no longer be objectives. Only standards. In fact significantly less, yet more broadly written standards.

On example is the mention of a "primary and secondary" survey in the patient assessment section. Does this mean that the current system is out? Do we no longer have initial assessment, focused exams and ongoing assessments? What are the steps of the primary and secondary surveys? The standards as written don't provide these answers.

As a textbook author I look at this approach has having both benefits and potential issues. On the benefit side when we revise books to current standards we get fewer people saying "But doesn't that go against the curriculum?" On the more interesting side, different authors and publishers could interpret the broader standards differently, causing textbooks to vary significantly—much more than they do today.

So how will the National Registry test standards that are less detailed—especially when textbooks may vary?

The Registry creates test items based on a practice analysis with a balance of topics and skills based on criticality and frequency. This won't change. The Registry always looks at books to make sure concepts are covered. And what we can't forget, the science of medicine is always the basis for what we do. If we find that care for shock, cardiac conditions or anaphylaxis changes so will the books and the exams.

But what about the "million dollar question": Do the hours change?

Perhaps. Again using EMT as a guideline it has been estimated that the current course, as specified in the guidelines, will run 170 – 180 hours. And from what I have heard, this is

[continued on page 10]

Kennebec Valley News

KVEMSC Holds Annual Meeting

KVEMSC held its annual meeting and elected the following members to the Executive Board:
Mark Kimball, Gardiner Ambulance, Chair; George Tatakis, UKVAS, Vice Chair; Tim Beals, Delta Ambulance, Finance Chair; Barbara Demchak, Human Resource Chair; Tiffany Stebbins, AMS, Education Chair; Duane Bickford, Fairfield Fire, Treasurer; Bill Page, Waterville/Winslow Fire, Clerk; and Gary Petley, Clinton Ambulance, At-Large member. Welcome to new members and thank you for your commitment to the region and its EMS Providers.

Wm. Thomas Hyde Memorial Award Presented

The 4th annual Wm. Thomas Hyde Memorial Award was presented on June 21st at the Annual meeting. This year's recipient was Jason Farris of Augusta Fire. Jason was nominated by his partner at Augusta Fire for his dedication to his community and his desire to serve others. Jason's family was on hand to see him receive this honor. We thank him for his service to public safety and are happy to have honored him at our annual meeting.

The 5th Annual Wm Thomas Hyde Memorial Award will be presented at our annual meeting in June 2008, and it is not too early to consider nominating a member of public safety. This award is present to the EMS, Fire, Police or Dispatch provider from Region 3 who best represents the characteristics of Tom. Tom was a well respected and dedicated EMS Provider, Firefighter and educator who knew how to balance both this commitment to his family and to his EMS career. Anyone from region 3 wishing to submit a nomination can do so by contacting a member of the EMS staff at KVEMS.

Photo courtesy
Redington-Fairview EMS in Skowhegan

KVEMSC Bids Farewell to Dr. David McKelway

On July 20th, Dr. McKelway left his position here at KVEMC as Regional Medical Director. He will continue to be active with the region and provide us with assistance as needed. David will now have more time to spend with his family and at his position as Emergency Room Physician at Inland Hospital in Waterville. We all thank David for all his work here in the region and for the years of service to the area providers. Good Luck, we wish you well.

KVEMSC Welcomes Dr. Douglas Boyink

Dr. Doug Boyink is back as the interim- regional medical director. He previously served as regional medical director a few years back and has decided to join us again. Doug works as an Emergency Room Physician at MaineGeneral Medical Center in Augusta, where he has been very active with QI in that area.

We are excited and grateful to have him back during out time of transition and look forward to working with him again. Please join us in welcoming Dr. Boyink back to the region.

Photos from the Fryeburg Fair Disaster Exercise courtesy Mark Belserene

Northeast Region News

On September 16th, there was a celebration honoring Albert and Carol Hamor and their 65 years of combined service to Northeast Harbor Ambulance and the Maine EMS system. We appreciate all they have done for EMS over the years.

In July Northeast EMS hired Sally Taylor, EMT-P, as Training Specialist and TC Coordinator for Region 4. Sally is an I/C, an EMT-P with Capital Ambulance and Machias Ambulance. She has been in EMS for seven years and an instructor for four years. Sally brings a wealth of experience and knowledge to her position and has a great vision of what she wants to bring to the region.

Nationally known speaker, Bob Page, came to Bangor again with his second series of 12 Lead Interpretation and Capnography seminar. We look forward to Bob coming every year and his seminars are always filled with laughter and learning. We hope to bring him back to our area next summer.

Northeast EMS is putting on a ALS Prep course starting October 1st. This course is for EMT Basics thinking of moving ahead to ALS. It covers many subjects from study habits to medical terminology.

Mid Coast News

The Regional Council welcomes new Board Directors Tracy Weed, EMT-I, Knox County Representative; Roland Abbott, EMT-P, Lincoln County Representative; and Sue Dupler, RN, Waldo County General Hospital Representative. This year the Council will meet regularly in Union, except Waldo County in September and Lincoln County in January.

The fall semester starts out with three EMT-B courses with another being planned for Lincoln County. The Intermediate program starts later this fall, directly followed with a Paramedic program. Each basic level student with receive a personal v/s & PPE kit (to keep) covered by a $25.00 equipment fee increase. Transporting Kids Safely is being offered in September, PEPP in October. Instructor CEH workshops include practical evaluation techniques, current methods, and integrating with Distributive Learning; adult learning ethics and methodologies; and computer use and IT presentations. An important MCEMS Education Committee project is to further expand use of Internet Based Distributed Learning and other Distance Learning capabilities for our islands. Recent additions to our classroom include wireless interent access for students with enhanced LCD projector viewing. Inhalant Abuse Prevention Resources for instructors are available at MCEMS; as well as update modules such as 12 lead and advanced airway, along with the recently introduced Mark I training kits/resources; AVOC cones can be picked up in Union.

The 27th Annual MCEMS Seminar will present many new topics including Road Pizza & Firehouse Chili; Public Safety Response to Locomotive Emergencies; MEMSRR with Image Trend; Emergency Vehicle Accidents in Maine; Pandemic Flu: Don't Panic Yet; and many more. Our guest speaker this year will be Keith Wesley, MD, FACEP, Wisconsin State EMS Medical Director, renowned author. We look forward to having healthcare providers from all over Maine and New England (and abroad) attend the conference November 7-11 at the Samoset Resort in Rockport.

Our new CTC Center/AHA Coordinator, Becky Flanders, EMT-I, has completed a 12 month schedule for the center for AHA instructor training, Heartsaver and Healthcare Provider courses, as well as for ACLS and PALS courses. She will be on board full time throughout the fall, assisting with the seminar.

We continue to offer Occupant Restraint Safety programs in concert with the Bureau of Public Safety. Rick Tarr, Hwy Safety Specialist, can be contacted at 592-0349, at rickmidcoastems@yahoo.com or through the MCEMS office. For further information, visit www.midcoastems.org. or call 785-5000.

Education Standards

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the focus of the most voluminous comments from reviewers.

One final note: anyone who was around for the development and release of the 1994 EMT-B curriculum will recall an atmosphere of secrecy around development of the curriculum. This was followed by a significant backlash of anger and resentment over curriculum changes. This time there will be no surprises—the standards are there to review in first draft.

Has this article raised more questions than answers? If so, good. It is time for all instructors and providers to get involved in the system that creates the rules for us. Go to the education standards web site (again, www.nemses.org), look at the process and the draft standards.

Dan Limmer coordinates EMS programs at the York County Community College in Wells and is a paramedic for Kennebunk Fire-Rescue. He can be reached at danlimmer@mac.com.

Aroostook Region News

Aroostook EMS Region Five is pleased to announce the most recent Heartsafe designation by Healthy Maine Partnerships.

Madawaska Ambulance has obtained Silver level designation based on their efforts as a community leader in active cardiac and CPR education to the citizens of Madawaska. This brings Aroostook EMS Region Five to second place in the State for the number of Ambulance Services that are Heartsafe designated. Our goal is to become the first Heartsafe Region in the State. Congratulations, Madawaska... on a job well done.

For Services wishing to apply for this designation, please contact the Regional office toll free at 1-888-492-1624, and a program coordinator will gladly assist you in this process.

The Staff of the Regional Office

AROOSTOOK REGION EMS OFFERED EARLY 12 LEAD EKG STANDARDS PROGRAM IN OCTOBER

Course designed to meet the objectives of the Maine EMS protocol to be implemented next year

This course was designed for healthcare providers who participate in the treatment of cardiac patients, whether in or out of hospital setting. The program is specially formatted by experienced EMS providers to focus on the particular needs of the advanced cardiac care responder, and the collection of 12 lead EKG information. Although open to any healthcare provider, the class focuses on better preparing providers to provide out-of-hospital cardiovascular life support interventions, utilizing 12 lead EKG technology and data. The course was designed to meet the 58 objectives of the Maine EMS 12 lead protocol, necessary to conduct successful EKGs in the field.

Nadine Lamoreau, FNP from The Aroostook Medical Center, is the main course instructor, with the assistance of the newest member of TAMC's Cardiology Team, Dr. Najam Awan.

Aroostook Region Five EMS is very proud to offer this integration of effective advanced life support technology, with the importance of effective team interaction and communication during treatment of the cardiac patient. Additionally, providers were expected to review cardiac rhythm recognition and the objectives of Maine EMS 12 Lead EKG Standard of Care, soon to be implemented as part of the Maine EMS Medical Control Protocols. (Anticipated in 2008)

Emergency medical professionals are encouraged to sign up for all or part of this five week series designed for prehospital care providers. (Intermediate, Critical Care, and Paramedic EMT's, ER Staff, and Cardiology Staff) Maine EMS CEHs will be awarded for course completion.

The course is designed for advanced pre-hospital and emergency department providers and is open and recommended for other medical providers such as physicians, nurses, emergency medical technicians (intermediate, critical care & paramedic levels), and other professionals who may respond to a cardiovascular emergency.

The course is approximately 15 hours, however partial credit can also be given for completion of one or more modules. Taped media coverage of the entire course with competency testing will also be available to all EMS services for future training purposes. For more information or to register for a class, please contact Aroostook EMS, 111 High Street, Caribou, ME 04736 or call 492-1624 or 1-888-492-1624.

Storm Evacuation

Another Side of EMS

Douglas A. Remington, EMT-P
North East Mobile Health Services

North East Mobile Health Services is one of Maine's largest ambulance companies and contracts with many skilled care, assisted living and residential facilities in Southern Maine. Following the Katrina disaster, our management team had formulated plans in the event that Maine was ever struck by a significant storm or hurricane. While Maine has not had a hurricane since Bob, we knew that the potential existed for a Category I, II or possibly even a Category III hurricane. We considered which facilities would be most vulnerable should such a storm hit Maine. Due to its location on Back Bay in Portland, we knew that the Seaside Rehabilitation Center was subject to tidal surges from Casco Bay. We worked with representatives of First Atlantic, the parent company that owns Seaside, and the management of Seaside itself to develop an evacuation plan in the event that a prompt evacuation of its residents was ever necessary. While our plan focused primarily on weather-related events, we knew it would be prove useful in other circumstances such as a fire or hazardous waste spill.

Historically, we knew that coastal Maine was more likely to see flooding or extensive damage from coastal storms like the Patriot's Day storm of this year. Hurricanes typically move at a high rate of speed as they reach New England and severe winds and tidal surges pushed by those winds last only a matter of hours but Nor'easters can hang around for days. This is exactly what was predicted and eventually occurred this April in Southern Maine.

The National Weather Service was predicting a severe Nor'easter for the weekend of April 14-15 with the potential for the storm to stall south of New England. The extended fetch of strong easterly winds would pile up ocean water on the coast of Maine from Portland south. Management at Seaside and North East kept their eyes on the weather reports.

Seaside was contacted by Maine E.M.A. on Friday the 13th and informed that the potential storm surge could rise high enough to impact the facility. They were advised that the first high tide that might be a problem would be at 22:00 on Sunday night and that the evacuation of more than 140 residents was a distinct possibility. Other high tides would occur Monday morning, Monday night and possibly again on Tuesday. Seaside contacted North East that afternoon. As Vice President of Operations, I notified the North East upper management and supervisory staff to pass on the potential threat to all of our employees. On Saturday, all North East employees were paged and an on-call list was established for Sunday beginning at 14:00.

While our plan focused primarily on weather-related events, we knew it would be prove useful in other circumstances such as a fire or hazardous waste spill.

North East maintains a fleet of 18 ambulances, 7 chair cars and a wheel chair bus in Portland, along with 5 additional ambulances in Topsham. With the duty crews, plus management and the on-call personnel, we knew we could put nearly all vehicles into service so that we could, if necessary, handle both the evacuation and our regular call volume.

I maintained phone contact with Seaside's administrator, Joel Rogers, throughout the weekend and asked Lee Johnson, one of our supervisors, to meet with the Director of Nursing on Sunday morning to begin laying the ground work for the evacuation. Later that day we were told that the Sunday tides would not be a problem but that there was significant concern for Monday evening's tide.

On Monday morning, as we were engaged in a planning meeting, word came that the evacuation would start that morning. Supervisor Toby Callan, Director of Marketing Polly Miller and Steve Bennett, Director of our Topsham Division, were assigned to the Seaside Facility. Polly, having come from the assisted living/skilled care world, would work closely the Seaside administration and clinical staff, as patients were divided into groups and assigned temporary shelter locations. Skilled patients would be transported to Mercy and Maine Medical Center first, while other patients would be transported to New England Rehabilitation Center, The Portland Center for Assisted Living, and sister facilities including Falmouth by the Sea, Hawthorne House in Freeport, the Gorham House in Gorham and Seal Rock in Saco.

All available units and chair cars were dispatched to Seaside where Supervisor Toby Callan would act as loading officer and dispatcher. He maintained contact with our dispatch center and assigned ambulances and chair cars out of the staging line to handle the day to day transport and emergency requests. This worked extremely well and essentially our dispatch was "blind" to which transports were occurring at Seaside. When they needed a truck, the loading officer assigned them a truck for the other call.

Another North East Representative, Ken MacDonald, was sent to Mercy while I went to Maine Medical Center to facilitate the flow of patients and ambulances in and out of those facilities. Mercy Hospital really had its act together and created internal transport teams in the hospital to receive patients from the ambulances and bring them to their respective rooms. This process significantly shortened the turn around time of transport units at Mercy. Seaside and North East concentrated on the skilled patients first and once they all had been relocated, the remainder of the Seaside residents were moved to other facilities, some as far away as 20 miles.

As patients left Seaside, their names were recorded, along with the number of the transporting vehicle and the destination. North East also had to move Seaside personnel and a number of medication carts and other materials needed to support the patients while they were away. We found that using two to three people on some of the chair vans and especially the wheel chair bus was especially helpful. While one person brought a patient to the van through the blowing wind and rain, another loaded and a third secured them.

The operation started at 10:00 and was completed shortly after 18:00. Following the transport of remaining supplies, the operation shut down by 19:30. The transport of more than 140 patients had been effectively carried out while still maintaining the normal daily volume. Time was on our side with the flooding scheduled to occur at 23:00 that night. If ever needed, we knew that the operation could be handled much more quickly by mobilizing additional North East resources and utilizing mutual aid.

In the end, the facility was not flooded, with the highest tides remaining just below road level on Baxter Boulevard. With the crisis averted, we were then called upon to reverse the process on Tuesday morning, only this time with a much higher daily work volume. We concentrated on one facility at a time, starting with the other skilled care and assisted living facilities and then the hospitals. North East personnel assumed similar roles in reverse, only this time the on-site dispatcher was at the receiving end. Seaside personnel welcomed residents back and quickly re-established their normal daily routines.

AMR and the Portland Center for Assisted Living were a great help on the returns and all residents were back in their rooms by dinner that evening. We cannot express enough thanks to AMR and to the staff at all of the facilities who assisted and welcomed the Seaside Residents to their own facilities.

I would especially like to commend the North East staff as they faced 50 mph winds, heavy rains and innumerable trips back and forth from Seaside throughout the evacuation. They kept smiles on their faces and even "joked it up" with the residents. If you look up the term "Drowned rat" on Wikipedia, you would probably see a picture of one of the crews that day. They did a great, great job.

On Wednesday, North East staff got together to debrief the evacuation. We listed what worked and what didn't and created a list of things we would need in the future. The push-to-talk cell phones that our management carry were a great help and kept communication channels open. We knew that in some disasters (Katrina and the London bombings) that the cell system can quickly fail. Fortunately this did not happen. As part of our disaster planning we had purchased an emergency management file fold system which also provided a great work station at the site. We have now prepared two complete packages with items such as tape, pens, batteries, plastic bags, extension cords and six inexpensive two-way radios, just to mention a few. We had ordered food for the crews on both days and felt it would be useful to add paper plates, napkins, cups and utensils to the disaster package. Tie downs and bungee cords were included to secure the medication carts and other supplies in the chair vans. We also decided that next time having a laptop or two would help with record keeping. These packages are stored away and ready to go should we ever have to do this again. While we all hope that another evacuation will never be necessary, it is nice to know that we are well-prepared should it ever occur.

Tradition and Honor

Rob Simmons, EMT-C

Every week, somewhere across America, a public safety member dies. Sometimes the cause is natural, and other times it is job related. Very few of us plan or will even talk about the inevitability of death. But, when a death does occur, the responsibility to make the proper final arrangements is left to the member's family and public safety department. As public safety personnel, we are fiercely loyal to our service and want to ensure that the fallen comrade gets the "send off" they deserve. However, what they deserve and what is proper occasionally conflict with each other. There are strong beliefs, in the traditions, and honors of public safety. In a series of articles, I explore the options for providing a fitting tribute for a comrade who passes away and discuss some of the traditions of public safety.

A funeral is a way of saying goodbye and paying tribute to the deceased's service to their organization and community. Funeral services of great magnificence evolved as custom in Christian mourning in the 6th century. To this day, no other religious ceremony is conducted with more pomp than those intended to commemorate the departed. The funeral for a firefighter, EMS worker, and member of law enforcement has followed an historical pattern as the living honor the brave dead.

So how do we prepare for a funeral? Respect the family's wishes and consider all circumstances as to level of the member's service and honors rendered. The absolute decision in terms of a public ceremony, however, will be made by the Fire Chief, Police Chief, Rescue Chief, or appointed designee. I suggest your department preplan every aspect of a funeral ahead of time using checklists as a guide and keep the following in mind:

- Expect the unexpected. When it happens, you have something in place to keep things moving smoothly.
- No matter what occurs, remain flexible. A department that is dealing with the death of a member is grieving and can quickly be overwhelmed by all of the details. By remaining flexible, everyone is giving the respect to the deceased and the deceased's family.
- Maintain a list of contacts for outside help to oversee a funeral. When the department members are grieving, these outside assistants can provide a sense of calm to the ceremony.
- Establish relations with your local funeral director, florist, clergy, civic organizations for meeting halls, and caterers. Having exceptional services connected to the department early on avoids having to worry about the quality of the service.
- Become familiar with each type of religious service for members of your department.
- Have in place a Standard Operating Guideline (S.O.G.) for station coverage during funeral details. If you do not have an honor guard, contact a mutual aid department or State Chief's Association for assistance.

How you prepare your department in appearance and manner is directly related to the family and public impression of the deceased as a public safety provider. Very often, most of the family of the deceased, and the public, get their first and last impression of your department at the funeral. Everyone should be dressed alike whether it be in polo shirts and khaki pants or Class A uniforms. Train and educate your department in funeral protocols.

There are three levels of funeral services and honors:

Level One: Honors bestowed for the line-of-duty death of any active, uniformed member of the department.
Level Two: Honors bestowed for the non-line-of-death of an active, uniformed member of the department.

Full honors including the use of arched ladders, apparatus processionals, fire apparatus being used as a caisson and flag-draped caskets should be reserved for Level One services.

Level Three: Honors bestowed for the non-line-of-duty death of an active, non-uniformed member; retired member (whose death is not attributed to a line-of-duty injury or incident); honorary member; or a member's spouse or dependent children.

Which honors are bestowed is up to each individual department and the family; however, several guidelines should be kept in mind when planning a funeral. Full honors including the use of arched ladders, apparatus processionals, fire apparatus being used as a caisson and flag-draped caskets should be reserved for Level One services. It should be noted that all military veterans are entitled to have their casket draped with the U.S. flag in honor of their service to our country. A folded flag may still be presented to the family of the deceased for a Level Two or Three service, however.

Universal honors for all the three levels are:

- department casket vigil
- honor guards and color guards
- bagpipes
- department casket team
- final tone out and bell ceremony

For a Level Two or Three services, the bell ceremony should be 3-3-3 instead of 5-5-5. The traditional use of the 3-3-3 indicates the alarm is over and the responder is returning home. The traditional use of the 5-5-5 was to let all companies know that a fellow responder had died during the actual incident.

In the future articles, I discuss the initial notification procedure, U.S. Flag code and etiquette, death benefits, and assistance. I'll provide in-depth step-by-step procedures for a full Line of Duty Death (L.O.D.D). funeral.

Rob Simmons is a U.S. Navy veteran and a 19-year firefighter/EMT-C for the city of South Portland, Maine. He has been a member of the Professional Firefighters of South Portland Honor Guard since 1992 and is the Pipe Major for the Maine Public Safety Pipe and Drum Corps (not affiliated with the Maine Department of Public Safety). Rob is also a training coordinator for both the South Portland Fire and Police department honor guards and has coordinated funeral units locally, nationally, and internationally. He is a graduate of the U.S. Navy Honor Guard and Drill Team and the National Honor Guard Academy. He teaches honor guard classes through SMEMS and other local venues.

The Future is Now

Emergency Medical Services Communications

Greetings, Colleagues! I haven't written regularly in the Journal…. since doing so as State EMS director ten years ago. I now have the privilege and pleasure of pursuing an on-going mix of EMS system development projects from evaluating local EMS needs and services, to evaluating state EMS systems and serving as Maine's part-time trauma manager, to being a consultant for several federal agencies and writing papers and books, or parts of books, for national associations.

I will try to offer a column for upcoming Journals…. on issues at the national level that impact or will impact Maine EMS providers now or in the near future. It's called "National VS" (Vital Signs) to remind me to avoid BS and keep it at the street-level of interest at which we all work.

One of the roles I spend a lot of time at in the nation's capital and all over (my office address is Gate 9 at Logan) involves public safety communications and making sure that EMS is represented at the various tables where decisions are made. I would like to share with you a vision of just how we might be communicating in the future, and some things to which those of you who like to make the future happen sooner might pay attention.

In the early 1970's, when Emergency Medical Services (EMS) communications systems were initially implemented, channels in the VHF and UHF ranges were employed to dispatch crews, allow EMTs and Paramedics to notify hospitals of their impending arrival with a patient, and send EKGs and receive medical orders.

For the past 35 years, with very few exceptions, nothing much has changed. However, we are now becoming more aware of recent advances in voice, visual, and data communications technology that support potentially life-saving applications – applications that would have seemed unimaginable to EMS responders three decades ago.

For example, "telemedicine systems" with high quality, real-time, audio-video capability allow specialists to provide diagnosis and treatment to patients in remote or rural clinics. These systems, present now in Maine, also enable trauma surgeons to monitor and guide stabilizing procedures in smaller hospitals before a patient is transferred to a trauma center. In addition, broadband capabilities have great potential to improve upon the current "state of the art" 12 lead EKG transmissions, and offer clear cross-over applications to other vital signs monitoring devices.

At the same time, new technology such as automatic crash notification in cars, radio frequency ID tagging (like on inventory tags at Wal-Mart), miniaturized vital signs monitors (in one disaster-tag replacement application they are called "motes" denoting their tiny size), field-hardened PCs and PDAs, and software defined radio (SDR) offer technology that EMS could use to improve response and patient care.

If I asked you if your communications system adequately supports you, the fast answer is likely "yes". You may have "dead spots", but otherwise, you can talk to your dispatcher, other resources needed (either directly or through a dispatcher), and can talk to medical control.

But if I pressed you to think about whether there aren't some pieces of information that would benefit your next response and patient if you could have it earlier and/or more easily, I'd bet you'd also say "yes". When EMS providers really think about it, they often realize and are frustrated by the amount of information about which they passively "wonder" their way through an emergency call.

Current State Vs. Future Vision: "I wonder…" vs. "I know…"

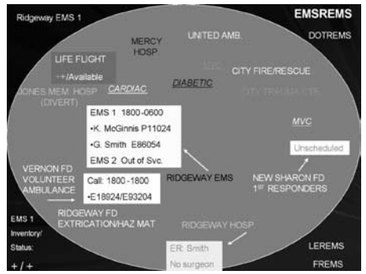
In examining a day in the life of an EMS responder, we are often confronted with more questions than answers. Information is often not available until after it was really needed to plan for the best patient care. However, in many cases, current and developing advances in communications technology could reverse this trend. The scenarios below demonstrate the current state versus this "future vision", describing real-world examples of how communications technology can improve EMS response, patient assessment and treatment, and potentially save lives.

Start of Shift

As a Paramedic, when I begin my shift, many times I wonder:

- Whether we will have the second ambulance staffed?
- What the condition of both ambulances and their equipment and supplies are?
- Whether the neighboring towns served have medical first responders today?
- Whether the volunteer ambulance service two towns over has a Paramedic or if we have to provide advanced life support back-up?
- Whether the helicopter is available?
- Whether the local hospital has an orthopedic surgeon today, or if possible fractures should be taken elsewhere?

These and myriad other questions could take significant time to answer. And many aren't answered until we are at the scene and need the resource.



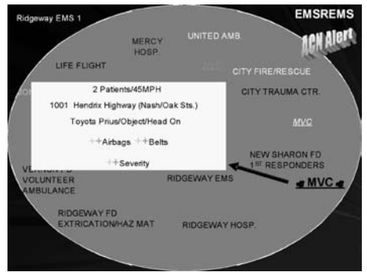
But imagine having a screen (picture an air traffic controller's screen) depicting our response and mutual aid areas (larger areas for ER staff and LifeFlight staff, of course). This "EMS Resource and Event Monitoring System" or "EMSREMS" shows the resources and events (e.g., emergency calls) in the area and their status when the device cursor is pointed and clicked on the desired icon. These screens could appear on EMS staff and on-line medical director PDAs, or on PCs at the ambulance base, ER desk, helicopter EMS crew desk, and serving as ambulance mobile data units. They are a platform to allow immediate "pulling" in of information by either receiving and holding it until the user wants it, or by polling other data bases via secure Web interfaces over cellular, satellite, or pubic safety radio frequencies. This is important to EMS professionals who cannot afford to have information "pushed" at them at critical moments during incident response when we are busy doing other things.

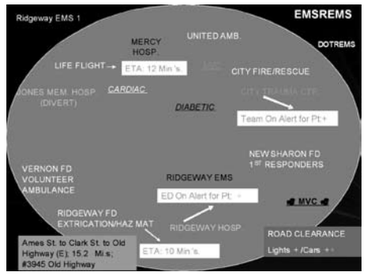
Also imagine that there are similar versions for law enforcement, fire service, public works/transportation. All have robust connections to databases required by their professionals and limited overlap with the others' systems as required by agreed upon needs in an overall system of systems. Each unit, whether in a PDA, or PC, or field-hardened tablet computer, has integrated voice communications and is able to "poll" all of the databases that it needs to provide real-time information.

With this system in place at the start of my shift, immediately, I know by clicking on appropriate icons on the screen:

- There are no first responders scheduled in the neighboring town (we may need to call for lifting or assistance depending on circumstances).
- We will be the Paramedic back-up for the scheduled EMT-only crew at the volunteer service nearby.
- My vehicle is in good operating order and missing no supplies (electronic interfaces with operating systems…even tire inflation… on the vehicle and medical equipment perform and transmit self-checks into EMSREMS; Radio Frequency ID tags on supplies and medications track their removal from the ambulance and sensors transmit status to EMSREMS).
- The helicopter has one of two units available. (Clicking on the icon opens a drop-down field providing additional information about crew and whether the unavailable unit is on a mission or out of service for an extended period.)
- The neighboring city ambulance is busy with a cardiac and motor vehicle crash. It also has a diabetic call which it has handled and designated to go to Mercy Hospital. (Icons change colors consistent with the ambulance handling the calls and the hospitals designated to receive the patient(s) when the crew makes that decision).
- The local hospital has no surgeon today, so all but minor trauma goes elsewhere.

[continued on page 18]





The Future is Now

[continued from page 17]

En Route to Call

Our unit is called to a motor vehicle crash. I wonder:

- How bad is it (number and status of patients)?
- Will extrication be needed?
- Will I need extra help and and/or ambulances (and will they be immediately available)?
- Will the helicopter, trauma center and other hospitals be available?
- What's the most direct route given construction, weather and the like?
- Does that vehicle ahead or at the stoplight see me and know to yield?

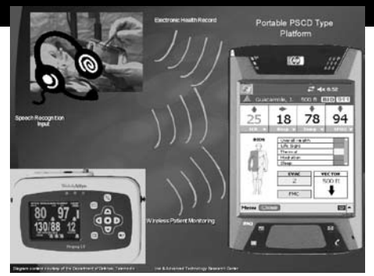
In the future, the EMSREMS shows a pulsing "MVC" icon as soon as it receives data on the crash from dispatch which has received the transmission from an automatic crash notification (like "OnStar") unit on the crashed vehicle. Clicking on the icon shows information about number of passengers, location in vehicle, seat-belt use and airbag deployment, rollover status, change in velocity at time of crash, and a numerical predictor of severity of injury to occupants.

With the EMSREMS technology in place, I know:

- I have two patients in a high velocity, single vehicle crash. One of two airbags has deployed and one of two sets of seat belts was engaged at the time of crash. There is a high risk of severe injury to one patient and moderate risk of severe injury to the other.
- Based on protocols established by Maine EMS, the helicopter and extrication services have self-dispatched based on ACN data received on their EMSREMS and Fire Service Event Monitoring Systems and have declared estimated times of arrival on the screen.
- The most direct route to the crash (around construction we didn't know about) as posted by the state DOT system.
- What hospitals and additional ambulances and personnel are available by clicking on appropriate icons.
- That I have good road clearance ahead by control of stoplights, and that some cars ahead have received my "road clearance with feedback" signal and know I am coming while some do not (I know which cars need a little extra siren).

At the Scene

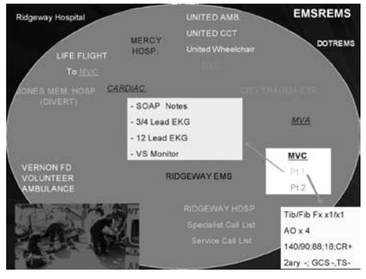
Usually, arriving at the car crash scene begins a harried process of mentally and manually recording information,



sorting and treating the patient(s), directing other resources at the scene, figuring out where patients will go and notifying those facilities, and requesting medical direction. I wonder:

- If I've kept all of the information straight on the patients seen?
- If I've recorded information appropriately (only so much room to write on my purple gloves)?
- If I've communicated adequately to those on the scene and at the hospitals?
- If I didn't miss something when interrupted by medical control at the local hospital for an update?

And the potential receiving hospital(s) staff wonder what's going and what can they expect to get?



With new communications technologies, I am able to begin assessing patients and speaking their signs, symptoms and other findings through a throat microphone and a highly reliable, laser-based voice recognition systems into EMSREMS. Vital signs, pulse ox, ECG monitors and other machines feed data into the appropriate databases in my PDA and on the ambulance computer through EMSREMS, for each patient simultaneously, and I can check these frequently to make sure that the information jibes with my direct eyeball assessment. A video feed from a hat cam and other cameras at the scene and in the ambulance(which I control) also begin to enter video into onboard databases through EMSREMS.

As a result, patient information is well-sorted and I will not have to re-enter it for my patient care records after the call, merely edit the information already there in EMSREMS, and the medical direction physicians at the local hospital and the trauma center, and the inbound LifeFlight crew know (without talking to me):

- That I am sending one patient via helicopter to the trauma center.
- That I am sending one patient to the local hospital; and
- The condition of their respective patients by my dictated impressions and notes, electronic monitors, and video feed by simply clicking on the appropriate patient record/monitoring icons on their screens.

[These] technologies are not as "futuristic" as one might imagine. The technology itself is either currently available or under development. The larger challenge is that, unlike our partners in the fire and law enforcement communities, there are too few EMS faces at the national, state or local levels looking at what communications technology has to offer...

Photo by Cathy Case

This Future is Sooner Than You Think

Technologies like those described above are not as "futuristic" as one might imagine. The technology itself is either currently available or under development. The larger challenge is that, unlike our partners in the fire and law enforcement communities, there are too few EMS faces at the national, state or local levels looking at what communications technology has to offer in terms of improving EMS response, thinking about how EMS might adapt communications systems to benefit the patient, and working to help secure funds to develop and implement these applications.

For instance, Maine is eligible for over $7 million in Public Safety Interoperable Communications grant funds NOW. Has anyone from the EMS provider community taken an interest in how EMS may benefit (Maine EMS can't do it all…local interest is needed)? On August 10, the FCC issued a report and order creating 34 MHz of public safety bandwidth for voice and broadband (what we will need for the types of data, telemetry and video capabilities described above) in the 700MHz range. Who is starting to evaluate how that might benefit Maine EMS providers?

Software defined radio (SDR) is developing capabilities to put the UHF/VHF frequencies we now use into one radio with cellular and 700MHz and other frequencies. If you are in a "dead zone" area, instead of trying your various devices to try to reach a dispatcher or hospital you will be able to hit the "dispatch" or "hospital X" button and the radio will connect you. You won't even know what frequency you are transmitting on.. and who cares? But is anyone evaluating these applications for use in Maine?

Do you know where decisions that impact this development in Maine are being made? If a few EMS providers and leaders in the state will make a concerted effort to learn more about this, there is great potential that we may realize this "future vision" sooner than we ever could have imagined.

Smooth Transition

Implementing Electronic Reporting

Chris Connor, EMT-P, Assistant EMS Director
Bucksport Fire and Ambulance

On July 1, 2006, Bucksport Fire and Ambulance went 'live' with the MEMSRR electronic run reporting system with the Image Trend Field Bridge. Planning for this began in 2005 when MEMS began sponsoring the Image Trend Workshops prior to the State server going on-line. After attending a couple of the sessions, we began planning for our move into electronic reporting.

One of the first conclusions we came to was that the State Bridge alone was not going to suit our needs. We transport to five different hospitals with an average of twenty miles one way to each. In talking with the ER representatives, we were told that the staff still needed some form of paper patient care report left with the patient before we left. Until the ERs established computer access to the State Bridge for us to use, this would mean writing a paper run sheet and then returning to the station in order to enter the information on computer there. This would mean an addition of upwards of an hour to the actual call length. We pay our responders for their time and this addition would not be feasible on our budget.

Therefore, we immediately determined that our best course of action would be to use some form of field data collection. It was not a hard decision, to use the Image Trend Field Bridge. The Field Bridge mirrored the State Bridge and we felt that by using this, we would not have to train our personnel on two separate systems. It also allowed our personnel access to better patient data when they need it.

The next step was determining which computer/tablet we should use. After looking at several different types, we found that the Panasonic Toughbook CR-18 was the best for our needs. It is a convertible tablet meaning that is sets up as a laptop with a pivoting screen that converts it to a tablet. It uses a mouse pad and a stylus. In our research we discovered that it was very important to specify the digitized version of the PC. This is slightly different than a standard touch screen tablet as it requires a stylus in order to use the touch screen capability. This allows for handwriting recognition and signature capture. We purchased our computers through Toughbooks.com.

The only other purchase we had to make was printers for the ambulances. When we went on-line, the ERs still did not have any means for us to print our reports. So we purchased inexpensive laser printers and use them when a printer is not available at an ER.

Photo by Cathy Case

We now have several hundred run sheets in the system and the data reports we are able to run and create are endless. Our QA/QI committee finds it easier to read, review and find run sheets. As an Administrator for the Department I have found that running statistics has evolved from a time consuming activity to something that takes minutes.

The following are recommendations that I would give to anyone who is looking to start electronic run sheet reporting:

1. Determine who is going to be the Service Administrator for your department. This should be someone who has a good understanding of how to work with computers and data software (NIFRS, Microsoft Access).
2. Allow your Administrator time to learn the ins and outs of the Bridge.
3. Your service personnel should have adequate time to train. We found it best to use the 90-day trial period software provided by Image Trend (they can provide means to extend this) and giving our personnel scenarios to input into the software. You should allow about two to three months and at least twenty to thirty scenarios for this.
4. Be prepared to have follow-up trainings and review each month. This helps to prevent the garbage-in, garbage-out phenomenon.
5. Keep in mind that this is not an end-all solution to better documentation. Personnel still need to review what they are writing.
6. There is a learning curve involved, as personnel begin to use the new system, it will take time to complete a run sheet. However, as they use it they will get better and faster.
7. Take advantage of the grants and funding provided by MEMS. This can provide a significant savings to you during your implementation.

I hope this information helps you in you quest to move into the digital age. Feel free to contact me should you have any questions about which direction to head into next.

Midazolam or Lorazepam

Dr. Steve Diaz, State Medical Director
and Jeff Regis

It has been over two years since the introduction of lorazepam, (Ativan) and midazolam, (Versed) in the Maine pre-hospital treatment protocols. The Medical Direction and Practice Board, (MDPB) engaged in significant discussion prior to the introduction of these benzodiazepines for seizure and cardioversion sedation patients. In the end, they decided to require paramedic services to carry Versed. Ativan, due to its short shelf life when not refrigerated, was deemed as optional.

In preparation for the 2008 protocols, the MDPB tasked the MEMS QI committee to review the usage of these medications. The catalyst for this review centered around the theory that we could use a single agent one drug for one class, thus reducing the possibility for medication errors, without sacrificing patient care. Today's studies indicate that Versed is equivalent to Ativan for use in seizures.

The MEMS QI committee with assistance from the Maine Health Information Center, (MHIC), reviewed the available data. After thorough examination of the data, the committee found these medications were indeed used properly for seizures and sedation for cardioversion patients. However, the data also revealed significant use of these benzodiazepines in non-seizure patients. This was further explored to see if we needed to add use of these medications in other prehospital treatment protocols, or just get a grasp of the scope of use beyond seizure and cardioversion.

Additional usages included: combativeness, vertigo, muscle spasm associated with dislocated hip, sedation for pacing, decerebrate posturing with trismus with history of tonic-clonic seizures.

In a single instance, use for facilitated intubation was discovered. This issue was referred to the appropriate region for resolution. Understand, this is a high-risk intervention not supported in our protocols, or by any national EMS organization, or any EMS body at the state level in Maine.

The aforementioned findings were distributed to the MDPB their evaluation. Their discussion resulted in the addition of a Combative Patient Protocol that will be included in the next protocol update. Additionally, post intubation sedation with On-Line-Medical-Control, (OLMC) will also be adopted in the next update.

We continue to collect and evaluate data generated by all EMS personnel. Through greater usage of the Maine EMS electronic run reporting, the data gathering is automatic and legible, thus enabling for evidence based medical decisions.

From the I/C News editor…

Greetings all! What do you think of the new look of the JoMEMS and the I/C News? I think they look great! I like having the graphics mixed in—it makes it more visually appealing. I hope the new look will inspire lots of input from the cream of Maine EMS' crop, its instructors!

As I listened the other day to a mother telling her daughter that she could do anything she sets her mind to, my first reaction was that it seems like a positive statement to inspire the daughter. But the more I thought about it the more I wondered if we actually do a disservice to our children when we tell them that, unless we also teach them to respect the reality of their limitations. I, for example, would never have been an NFL football star, no matter how hard I tried, no matter how desperately I wanted it, no matter how much I practiced. If my parents and my teachers had always insisted that I could do anything I set my mind to, how would I feel about myself when I didn't get into the NFL? Would I feel like a failure? Would I feel like there was something lacking in me, that maybe I didn't try hard enough? That I didn't want it enough? Would it make me keep trying, over and over again, and cause me to keep repeating the cycle of failure, rather than set realistic career goals for myself that I could achieve?

What about our students who just don't have the intellectual capacity to become EMTs? They may want it desperately. They may study harder than anyone else in the class. But having heard all their lives from well-meaning teachers and parents that they can do anything they set their minds to, what happens when they fail their EMT course, or when they pass the course but fail the licensing exam, maybe even over, and over, and over again? Did their parents and teachers set them up for failure? Should they instead have encouraged their children to develop realistic expectations based on their strengths and limitations, instead of telling them "you can do anything you set your mind to"? Unfortunately we can't undo what well-meaning parents and teachers have done, but what can we as instructors do with the adults who believe they can do anything if only they work hard enough, and show up in our classes and work hard but fail anyway? Unfortunately, I don't have an answer to this question, but I'm presenting it as food for thought as we face, semester after semester, that student who works so hard and never quite "gets it," while we wonder if they are "EMT material" after all.

The situation reminds me of a tragic story we might have heard about a person who has disappeared and the family who spends months searching for him. If the person is found, it becomes an inspirational story about how the family never gave up hope. If the person is not found, however, we hear about how the tragedy is doubled, because not only is the person never found, but also that the family was unable to accept reality and move on. If our EMT student passes this licensing exam on his sixth or eighth attempt, should we be celebrating that he never gave up hope? If he takes the licensing exam three or six or 12 times and doesn't pass, is it a double tragedy, on the one hand because he can't achieve his dream, and on the other hand because he's lost, never to recover, all the time that he spent trying? In those situations, there's no way for us to know whether it's a story of inspiration or one of tragedy until it's over.

State News

Board Approves 12 Lead EKG Training Components

From the KVEMS Pulse August 2007

The Board of EMS has approved a list of primary educational components for 12 lead EKG training. Effective immediately, these components will be included in all future initial paramedic training programs. These components are not currently mandatory for licensed paramedics; however, service chiefs and training officers would be well advised to take them into consideration as they plan expanded and continuing education.

MaineHealth has provided Maine EMS with funding to assist services with the cost of providing approved 12 lead training. For details, contact Maine EMS.

Also, along with the 12 lead educational components is a 12 lead QI tool that may be used by services and regional QI programs. Both the educational components and the QI form are available for download at the Maine EMS web site.

Regional News

Continuing our look at education leadership in each of the regions, this quarter we look at AREMS. Steve Corbin tells us: "Daryl Boucher is the newly appointed Education Subcommittee chairman for Aroostook Region 5 EMS Council Inc. Daryl Boucher, is an MS, RN, CCEMT-P, PNCCT/EMS Coordinator/Nursing Faculty for Northern Maine Community College in Presque Isle, and is an active Paramedic with Crown Ambulance in Presque Isle.

"Daryl has been quite active in the Region for almost eight years, and is a valuable educational resource for local EMS personnel.

"Aroostook Region 5 is very appreciative of Daryl's efforts in helping to establish a Pediatric Transport Team in Aroostook County; today several members of that team have been certified by UMBC as PN-CCEMTP's."

AREMS

Aroostook Region 5 has announced that it is seeking interested candidates who would want to participate in an I/C course conducted through Northern Maine Community College in Presque Isle. Regional Coordinator Steve Corbin stated that Region 5 (Aroostook) has recently taken a hit in terms of the number of active ICs in his region. "We have lost a considerable number of veteran ICs, mostly due to their extensive years of service."

Corbin added that this would the most opportune time for those sincerely interested in making an impact in EMS to consider becoming licensed Maine EMS Instructor/Coordinators. For more information, please call Steve Corbin at 888-492-1624 or, to enroll, please call Daryl Boucher at 207-768-2756.

KVEMS

Kelly Roderick reports that KVEMS is currently working on plans for an IC workshop to be held in October. They are looking at seven hours of Category 7 CEUs in the areas of skills instruction and NREMT practical and written testing preparation. While they have not chosen a date yet, be watching for more information on this.

Kelly also says that Regions 3 & 4 are looking at hosting an IC retreat in the spring. It will be a two day session with a national speaker. This will be an excellent opportunity to network with other ICs and to share ideas in a relaxed setting. No date has yet been chosen for this event, either, but they will be sending out information as plans are finalized.

Rick Petrie is working on developing an IC course addressing the needs of the skills instructor. This will include a DVD and textbooks for instructors to use to assist in teaching practical skills. Maine EMS is assisting with this project.

SMEMS

Donnie Carroll from Region 1 reports that SMEMS is working on plans to hold as many as two instructor/coordinator courses late this fall, one in York County and another in the Portland/Portland north area. They will send out notices once the details have been worked out.

They are also looking at presenting an IC update program. The region has recently obtained two Zoll E-series monitor/defibrillators, which will be available for use in ALS classes, and they will build the IC update around the use of these monitors and tips for teaching students to use them. Be watching for notices about this as well.

When asked what SMEMS is doing about filling their recently vacated Education Coordinator position, Carroll says the region has this on hold while they do a full evaluation of roles and responsibilities of all the personnel in their office. They are working with the Maine Association of Nonprofits to help them decide how best to allocate their resources.

Photo by Sharon Bray

Committee Briefs

Education Committee

Brian Chamberlin, BS, FF, EMT-P; KVEMS Education Coordinator

Although the Maine EMS Education Committee continues to work on a variety of projects, two efforts have really dominated our agenda as of late. The first is accreditation and the second is the upcoming protocol changes.

Accreditation is an enormous project centered on how institutions are approved to teach licensure programs. Currently, individual classes are approved by the regional offices on a one time basis. Our committee feels we need to enhance this process to include more than just a moment-in-time check sheet, but also ongoing quality assurance and a continued look at the product that institution puts out.

Within this project, our first task has been to examine the components that really are critical to MEMS licensure programs. This has been a great opportunity to allow us to look at how we conduct the business of education in Maine, and has led to the potential addition of such important elements as the incorporation of distributive or distance learning aspects to our classes. This review has also allowed us to focus on the importance of outcomes in an approval process; it is one thing to be approved initially, but the question remains, what if none of the students pass? Shouldn't there be an opportunity for further review? Our committee thinks there should.

This broad view of accreditation is similar to how many other healthcare fields, including nursing and athletic training, approach their education, and we hope to pull the best components from their experience as they relate to EMS. Daryl Boucher, Dennis Russell and Eric Wellman continue to look at other standards to help us find consensus. As always, feedback is welcome.

The second big project is the upcoming protocol changes. As many providers are aware there is a protocol revision and update due out in 2008. The MEMS Education Committee is currently working to determine the necessary education needed for these proposed changes. We are currently looking at each section of the protocol book and doing a "training needs assessment." Considerations such as delivery methods, program development and necessary curriculum updates are all parts of our ongoing task. These determinations will allow us to make recommendations to the MEMS Board as to the true impact of proposed changes, and we hope will give them insight to do what is right for our system.

Beyond the "big two," the MEMS Education Committee is hard at work on a variety of other topics and projects. As always, we look for provider input and ideas. The Committee welcomes all who would like to attend our meetings, which are held the second Wednesday of the month at 9:30 a.m. at the Commerce Center in Augusta (where the MEMS office is). Come see how EMS education in Maine works at the state level!

Exam Committee

By Jacky Vaniotis, Chair, MEMS Exam Committee

As of July 1, 2007, 232 BLS candidates had taken the National Registry CBT exam in Maine. Over the coming months the committee plans to analyze the results of this testing. Also, as of July 1, 2007, Maine began using the NREMT Paramedic level written and practical tests. Maine's representatives to the National Registry are Dan Batsie, Dawn Kinney, Gary Utgard, and Drexell White.

The project the committee is working on at press time is updating the Intermediate written exam, which is the only written exam still maintained by Maine EMS. We are hoping that we will have that project completed before the summer intermediate courses need to test.

Please feel free to attend any meeting of the Exam Committee, which meets on the second Tuesday of each month at 9:30 a.m. As always, we recommend that you contact the MEMS office to make sure a meeting has not been canceled or rescheduled.

You must give some time to your fellow men. Even if it's a little thing, do something for others - something for which you get no pay but the privilege of doing it.

Albert Schweitzer

Computer Corner

iWeb

Sean Hall writes that Mac has a $79 iLife program called iWeb, which he says is a really easy-to-use web page creator. He used it to create his web page at http://web.mac.com/sshall1. He said he also used the iWeb program to post lectures for his friends in school, and believes this would be a good tool for instructors.

He writes: "iWeb is a wonderful little trio of software, but is only usable by those who have Macs. If you are a Mac user, you are well aware of the advantages of iWeb and its ease of use for publishing files in conjunction with DotMac, which unfortunately cost roughly $100 a year for use.

"My point is this: we now have the power of the internet at our fingertips. There is web space everywhere; most people get it when they sign up for an internet account. Use this space to your advantage for teaching! Use common programs like PowerPoint to publish lectures in Adobe PDF format for your class. Use Google mail, another freebee, to set up a group for communication. These are resources that are out there no matter what type of computer you use.

"And please instructors, also do not forget that not everyone has access to a computer on a regular basis, nor is everyone computer literate. Always be ready to fall back on the old reliable paper outlines, and do not forget how to use the chalk board or dry erase board. I have had internet connections fail, PowerPoint presentations go to electronic heaven, and the list could go on. So as instructors it is our job to use technology to the fullest, but we must always be ready for whatever may happen, just like in the old days when the slide would get stuck in the projector and you would rush across the room to pull it out before it would burn up and cause the bulb to burn out - does anyone remember those days?"

CPR/AHA

The American Heart Association has a collection of patient handouts that instructors might find useful as handouts in their classes. They cover topics including angina, atrial fibrillation, cholesterol, blood pressure, congestive heart failure, warning signs of stroke, and many more. You can find a directory of these patient handouts at www.americanheart.org/presenter.jhtml?identifier=300435

Incident Response

Sean Goodwin; Kennebec County Emergency Management Agency

As we start thinking of fall, our departments need to look at where we stand with our NIMS/Incident Command training. I know, I know, we have all heard it before, training, training and more training!

By September 2007, all police, fire and EMS responders need to have NIMS/Incident Command training. All responders, as well as anyone having anything to do with response and or response planning, need to have IS-100, IS-200, and IS-700, and those higher up on the food chain may need to have ICS-300, ICS-400 and IS-800, depending on how high up on the chain they may be. All responders have had since fall of 2004 to do the training.

Fire Service Training, Maine Emergency Management Agency as well as county Emergency Management Agencies have been offering the training for free, and have been providing both day and night classes. There are even a few training vendors out there doing NIMS training.

Well the time has come, if your department wants Haz-Mat training, your department must now be NIMS compliant to get any funding from Maine Emergency Management Agency and the State Emergency Response Commission.

Some of you out there say, "no problem, we only do EMS work," but when you and your department go for a fire or EMS grant, a project grant, or some other grant, someone will ask if your department meets the NIMS requirements. NIMS training is a condition for getting any federal preparedness fund. It doesn't matter if your department is EMS, police or fire—no NIMS, no preparedness funds. Some of the county Emergency Management Agencies will also be doing the same as the feds and the state: no NIMS, no funding. Keep in mind, Homeland Security funds that come to Maine are given to the locals by Maine Emergency Management Agency or by your county emergency agency.

IS-100, IS-200, IS-700, and IS-800 can be done on-line or in the classroom setting. Ask your county EMA office where the classes are being held or how to get on-line. ICS-300 and ICS-400 can only be done in a classroom setting.

80% of the responders in Maine need only IS-100, IS-200, and IS-700, and can do all three classes on-line, or can ask for a class.

If there is anything our office in Kennebec County can do for your department, please call us at 623-8407. Good luck, be safe!

Jumping Through Hoops

Immunization and Other Pre-Matriculation Mandates for EMS and Allied Health Students

Daryl Boucher, MS, RN, CCEMT-P, Allied Health Coordinator,
Northern Maine Community College

At the start of every clinical course, EMS instructors and clinical coordinators are faced with the arduous task of ensuring that all students entering the clinical environment meet many admission requirements. Students and instructors alike may become frustrated with the growing list of regulatory prerequisites for clinical, and the hours that are needed to document compliance. For some students, the mandatory admission requirements present another barrier to pursuing their education. However, with proper preplanning and early application, the burden of completing these tasks is lessened. More importantly, both clinical instructors and students can feel confident that students will be as safe as possible as they begin caring for high risk patients. The purpose of this article is to guide students and instructors through the maze of state, federal and facility immunization requirements before every student's clinical experience, and to provide tips to clinical coordinators on how to better track and monitor students.

There are two critical points on which this article is based: first, it is important to recognize that colleges, schools, clinical organizations, and ambulance services have different and varying requirements, and with emerging research, these requirements seem to change annually. Additionally, programs may change their requirements for students based on risk. For example, the risk of needle stick for an EMT-Basic student is significantly lower than that for an ALS provider, and the time spent doing clinical work is far less, therefore, the overall risk for the EMT-Basic is less. Consequently, it may be reasonable for some programs to adjust the clinical requirements slightly based on level of licensure course or on assessment of risk of exposure to the student. However, there are some constants that every EMS student must meet, and this article will provide general CDC guidelines. When in doubt, though, it is important to contact the experts.

The second critical point on which this article is based is that government mandated immunization is not only for the protection of the provider, but also for the protection of the immunocompromised patients we come in contact with during every clinical experience. I frequently remind frustrated applicants that above all, our charge is to first "do no harm," and failing to be fully immunized could potentially place high risk patients at even greater risk.

Who makes the rules

Immunization guidelines and prerequisite lists are established by various organizations, including the Centers for Disease Control (CDC), CDC Maine (formerly the Bureau of Health), OSHA, and by various accrediting bodies. Additionally, hospitals, ambulance services and healthcare organizations may add additional requirements. Colleges and sponsoring organizations may also have slightly different rules. For example, at Northern Maine Community College, we require all EMS students not only to have a complete immunization record, but also to have a respirator fit test and a complete physical prior to entry into the program. This assures that, should a student need to care for a high risk patient, he or she has already been properly fitted and is knowledgeable about accurate use of a respirator. While not all programs have this obligation, the risk of exposure is considerable, and the cost for such a requirement is minimal. Many places contract with an advanced practice nurse to perform this function.

Furthermore, most clinical facility contracts specify student and faculty requisites for clinical. Failure to comply places the clinical contract between the clinical site and the training entity in jeopardy, so leaders painstakingly assure all students meet the clinical requirements.

TABLE 1

Sample Clinical Contract Student and Faculty Requirement List

All students completing clinical rotations at this facility must have on record:

- Immunizations including DPT, hepatitis B, polio, MMR and titer, varicella or titer, and PPD annually
- CPR healthcare provider
- Liability insurance of $1 million per occurrence/$3 million aggregate
- Signed HIPAA and confidentiality agreements

Rules for hospital-based and municipal-based services also vary considerably. Hospital-based service employees and students are generally required to follow all hospital personnel mandates which, in some cases, are more stringent than municipal or private service requirements. It is incumbent upon program leaders to get a list of requirements from each clinical agency and to assure that current program immunizations meet each clinical agency's rules. If possible, course coordinators should work with clinical sites to standardize the requirements as much as possible. With that being said, even if a certain clinical agency does not mandate some immunizations, the program must still assure students and faculty members meet CDC, state, OSHA and other applicable standards.

Immunization requirements

Information regarding immunizations can easily be retrieved from both the Maine CDC web site (www.maine.gov/dhhs/boh) and from the federal CDC web site (www.cdc.gov). For the purposes of the immunization program, students in any healthcare career educational program are defined as "Healthcare workers"; therefore, all requirements placed on facilities for healthcare employees also apply to students completing clinical rotations in those facilities. Fortunately, the immunization success at the grade school level in Maine has been exceptional; therefore many students who come to us for EMS education already have many of the requirements. All students entering college are required by the State of Maine to have a current tetanus/diphtheria and a current MMR (as evidenced by titer results) (Maine Immunization Program, 2007). Additionally, clinical facilities, based on OSHA standards, require three doses of Hepatitis B, and, more recently, have added the need to have a positive titer or additional booster if needed. Annually, healthcare workers must have an annual TB skin test. For healthcare workers assigned to maternal newborn units, serologic evidence of rubella (German measles) conversion is needed (a blood titer is drawn to confirm immunity). Finally, varicella (chicken pox) immunity is required. Healthcare workers must have documented a reliable history by a physician, or have serologic evidence (again, a blood titer) that they are immune. In 2006, influenza vaccination was added as a core measure, and most facilities now require healthcare workers to be vaccinated. These requirements are summarized in Table 2.

Photo by Cathy Case

In addition, many colleges are now suggesting three additional vaccinations, especially for those students living on campus. Administration of meningitis vaccine should be considered for college students residing in dorms (CDC Advisory Committee on Immunization Practices; Academy of Pediatrics; American College Health Association). The groups also urge education for college students about the risks and modes of transmission of all diseases. For female college-age students, the HPV (human papilloma virus) vaccine is strongly recommended to prevent the development of cervical cancer. Finally, many places are advocating immunizing high risk populations with the Hepatitis A vaccine. Although none of the above is currently state or federally mandated, high risk persons should consider the vaccines, as clearly the consequences of each of these diseases could be catastrophic. [For more information, see the CDC and American Academy of Pediatrics (www.aap.org) Web sites.]

TABLE 2

Immunization Requirements for Clinical Rotations

- PPD annually
- MMR (two doses and a serologic titer demonstrating immunity)
- Hepatitis B (three doses and a serologic titer demonstrating immunity)
- Tetanus booster (within 10 years)
- Varicella (two doses and/or a serologic test demonstrating immunity)
- Complete childhood vaccination record, including five DTP/DTaP (diphtheria, tetanus, pertussis), and four polio doses
- Consider pneumococcal vaccine, meningococcal vaccine, HPV, and Hepatitis A

Waivers and Barriers

Obviously, for the adult student returning to college, the above list is enough to scare them away. Cost, fear of injections or adverse reactions, and personal or religious beliefs have all been cited as common reasons for vaccination refusal. However, given the high risk nature of EMS work, most ambulance services now require employees to maintain these immunizations as well, and those who refuse should be counseled regarding the risk that they will incur and their selected career choice. Additionally, there continue to be programs to assist students to obtain these immunizations at little or no cost (CDC Maine, 2007). Adverse

Photo by Cathy Case

reaction information is easily available on the CDC immunization web site, and prospective students should be educated about the benefits of the vaccines as well as the risks of contracting or spreading these diseases.

Occasionally, students will request a waiver of the immunization requirements, and education leaders must develop policies to address this. In some cases, the refusal by the student is temporary (i.e. during pregnancy). It is appropriate in these cases to delay vaccination, but to assure the student understands the risks of exposure (that is, if the student is even allowed to participate in the clinical experience.) However, it sometimes occurs that the student, for whatever reason, refuses the immunization. In these situations, students would typically be prohibited from participating in the clinical experience, and would therefore be unsuccessful in the class. Policies which include the counseling process, appeals mechanism, and person responsible for the review should be in place. Many higher education institutions have avoided this by making the immunization process part of the application process. A student's application will not be considered unless all admission requirements have been met, including the required immunizations.

Recently, there has been some controversy surrounding the varicella titer (chicken pox) requirement. In the past, most healthcare organizations required that a "reliable history of chicken pox" could be recalled as sufficient to document immunity. Reliable history was defined as "a recollection or record of disease from the person, parent, or physician as sufficient evidence" that the disease had occurred. This was based on longitudinal studies that 97%-99% of the time the recalled history was accurate (CDC, 2004). However, since there is virtually no risk with administering the varicella vaccine to those healthcare workers assigned to high risk areas, many organizations have chosen simply to require the administration of the vaccine as an effective way to protect high risk patients (especially in OB, oncology, and hospice units).

Finally, students who have a positive PPD are typically required to have a chest x-ray to assure there is no latent TB infection. A positive PPD skin test indicates that there is either a latent or active TB infection occurring, and a chest X-ray is used to make this determination. Students who have had a negative chest x-ray are permitted to resume their clinical experience, and no longer need to provide annual TB tests.

Recommendations for clinical coordinators

News reports about disease outbreaks occur regularly, and EMS students are part of the highest risk category, as they frequently care for infected patients. Last year, there was an alarming mumps outbreak in Nova Scotia, Canada (CBC, 2007). Additionally, up to 75 New Brunswick residents contracted the disease. Many of those infected were young college age students. There is a significant Maine-Nova Scotia connection, as many students from Nova Scotia come to Maine colleges to complete their education, and the tourist exchange between Maine and Nova Scotia is growing. As we watched the spread of the disease, it reinforced the importance of these vaccinations, as we had students who were definitely in harm's way. I had a lot of comfort knowing that our local EMS students had been appropriately vaccinated and had very low risk of contracting this debilitating disease, and virtually no risk of spreading it to the patients they were caring for in their clinical settings.

For program leaders, it is crucial that a uniform list of requirements be published and enforced. Contracting with or hiring a health officer with this responsibility is ideal, as this individual can help assure that all students meet the requirements. The health officer at many colleges is also a nurse practitioner or physician, and therefore can assist in immunizing those students who are non-compliant.

I have found it to be preferable to decline admission of students who don't meet the immunization requirements rather than "chasing" them after admission. Students who are motivated to get into competitive programs are active in assuring a complete medical file. If a student is admitted without the immunizations, he or she has to be prohibited from clinical, and not only does this take up a valuable "seat" in the classroom, it also places the student in jeopardy of failing and not being able to successfully pass the course.

It is also important to recognize that immunizations are contractually or federally mandated, and as such, appropriate and comprehensive documentation of these is required. The health officer should maintain copies of immunization records, potential exposures and correspondence with clinical sites. I also maintain a simple Excel spreadsheet that includes all program requirements with expiration and due dates, and we include some of the information on the students' portal and college web site. Appropriate marketing of the requirements has helped reduce the number of students who are non-compliant at time of admission.

It is equally important to have policies in place that deal with potential student exposures. Though it is beyond the scope of this article, contractual agreements should specify what happens if a student might have been exposed to an infectious disease, like who is responsible for testing, etc. Legal guidance for development of policies is suggested, as some students could potentially be disqualified from some clinical settings or experiences.

Finally, an important role that we have assumed has been that of educator. Program leaders and the health officer have worked diligently with clinical facilities to assist in standardizing their requirements, and making them more consistent with CDC mandates. This is significant because students who rotate between facilities now meet the requirements of all the facilities, making clinical scheduling less time-consuming. The health officer now produces a letter to the facilities listing all of the students who practice/perform clinical duties in that facility, identifying the immunizations that they hold, and providing contact and reference information. During site visits by JCAHO or other accrediting or licensing agencies, individual student files with proof of immunization are made available for review by the site visitors.

A large amount of the clinical coordinator's time can be taken up with tracking and maintaining the immunization record of students. By addressing the immunization issue up front, clinical experiences are preserved, and students and patients are protected.

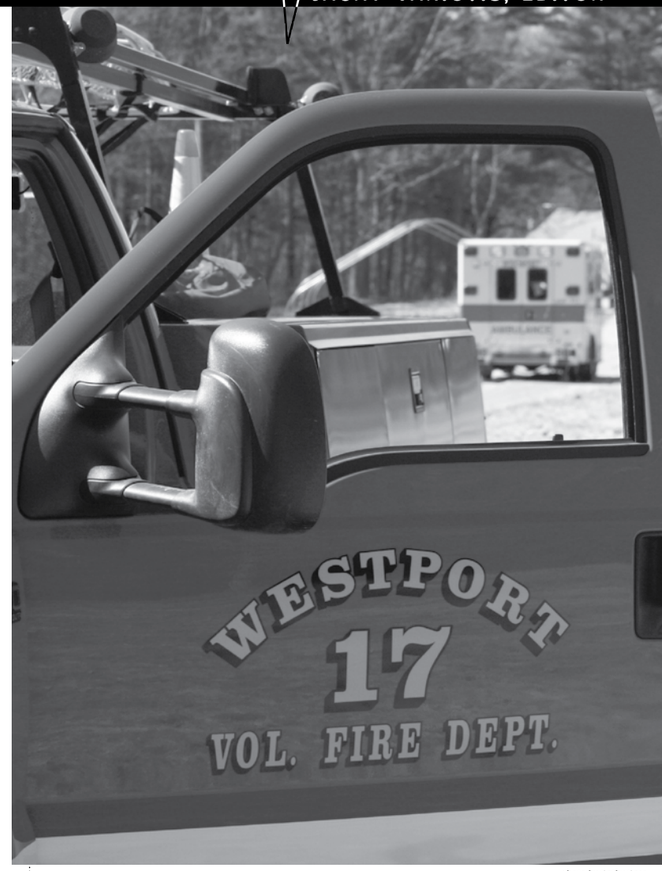


Photo by Cathy Case

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MAINE EMS I/C NEWS

In My Opinion

We Have a Need to Revitalize Training

Harold Thomas Carter, EMT-I, I/C, BS(Ed), MS. Commander, US Navy, Retired

I had an interview recently and several instructor coordinator topics came up. Here is a synopsis of my points made to that interview panel.

Teaching: In addition to teaching regularly in licensure courses and running a CEH or AHA class, I'd put on EMT-Basic follow-up classes at the six and 12 months point to get some feedback from students on their training.

CEH Requirements: I'd regularly schedule workshops on topics/skills needed, since I think our skills training may be falling short of the need. I would put a lot of emphasis on realism in training and skills assessment. I am enthusiastic about scenario method practicals. Another thing I would consider would be to promote use of online courses and CD/DVD classes. The new EMTs and young folks today can absorb the subject matter much faster with video and audio presentations than any lecturer can dream of... and it saves time and travel considerations.

Training Point of Contact: I would develop a list of contacts at all the services who would serve as a conduit for flow of information about training up and down the chain. Right now the flow of information is one way, and sporadic at best. We need continuous feedback from the field on how training is going. How can anyone improve anything if he or she doesn't know what it is that needs to be improved? Too many times I hear "If it ain't broke, don't fix it." That is just not proper management of resources.

I would hold workshops on classroom teaching techniques, not waiting for the next I/C class to be held. Some of our folks do not want to be I/Cs, much less have the time to invest in the class. I would provide some seminars for them to learn what they can.

We also need skill proficiency feedback. To get the feedback going on training perhaps a "QA" type form and process would be acceptable to the customers (the services and our EMTs).

Another pet peeve of mine is an instructor or experienced EMT who says: "We don't do it that way in the field." We need to teach the way we work in the field, and work in the field the way we teach. They syllabus needs to adjust to the current practices. Teaching is a very dynamic process and is constantly evolving.

Leadership/Management Workshops: I would hold semiannual leadership skill sessions. We wait too late in our attempt to develop leadership skills in our EMTs. Our customers get promoted to paramedic and have not received one iota of leadership training, much less any management class work. Social, psychological, motivational and communications skills all are vital skills that our folks need. Personnel management, evaluations, and budget preparation are skills that senior paramedics are required by services to have, but often they do not have any training in those areas.

Major incident: I would plan for a major incident. We are way overdue for a major EMS drill. I have been involved with EMS since 9/11 and not once have I seen any of the millions of tax dollars allocated for Homeland Security emergency operations spent on simulating a huge nasty train wreck, airline crash, hurricane response, huge ice storm recurrence, etc. New NIMS training is available, but our personnel are not required to be updated, EMS command is now integrated with incident command regimens, MCI/Triage coordination is limited to the hospital, or only a few select paramedics receive the training. We can slowly build our capability in small blocks for all the services, organize the planning, rehearse on a small scale at first, conduct talk-through then walk-through drills, integrate and critique at each level, and then schedule a big drill... county wide or bigger.

Publicity: I would encourage all class instructors and teachers of CEH classes to write a short article for their local paper announcing the upcoming class, and afterwards write again to announce its completion. Reach out to our towns and tell them what we do. Contact the papers to give them a little background on a recent accident (of course without HIPAA violation). The hospital staff needs to know what we do also. While the ER has an idea of our job they often are mistaken about our limits, and more importantly, our strengths in the field.

Last Words

Please submit any materials you would like to have published in the next issue of the I/C News by November 2, for publication in the January edition of the Journal of Maine EMS. Submit material to: Jacky Vaniotis, 172 Haskell Road, North Yarmouth, ME 04097, or email JackyV@Vaniotis.com

Maine EPIC

EMERGENCY PHYSICIANS INTERIM COMMUNIQUE

JOHN SAUCIER, MD, EDITOR | MAINE MEDICAL CENTER

Dear Tourists! We hope your pilgrimage to "Vacationland" was a good one and that you did not have to visit one of Maine's fine Emergency Departments. However, if you did, the following tips might prevent a return trip to the ED next summer, or perhaps make it briefer and less stressful.

1) Although we do have great phone and fax systems here, we did not receive a call from your doctor, a faxed copy of your records, copies of your lab work or x-ray reports. Please carry copies of all relevant medical records with you.
2) It is not a good idea to a) start round one of your chemo, b) have cardiac bypass surgery, or c) get a liver transplant just before vacationing on a small island in Maine. Take a little time to recover at home first.
3) Yes, we did call your … PCP, psychiatrist, power of attorney, next of kin and at two in the morning they were not waiting by the phone for our call. In fact they were almost as grumpy as our night staff.
4) The plastic surgeon was waiting by the door to examine your cherub's ¼ inch scalp laceration but left to repair a farmer's partially amputated hand. No, I don't understand his priorities either.
5) It's midnight and you look as red as a boiled lobster. Remember that the pleasant sea breeze at Old Orchard masked more than a healthy dose of UV loaded sunshine. Don't forget the sunscreen!
6) The fried clams here have all their parts as well as the mud they've been eating dropped into the fryolator. Expect a different and sometimes urgent gastric experience than what you are used to after eating them.
7) Moose are very big, very dark and very unpredictable. Drive carefully from dusk until dawn or your first experience seeing a moose could be your last.
8) Don't worry; there are no venomous animals in Maine … excluding black flies, mosquitoes and deer ticks, of course. Don't forget the bug repellant!
9) Maine is not part of Canada, but it is part of the Red Sox nation so if asked the orienting question, "What is your favorite baseball team?" do not say, "The Yankees".
10) If you find yourself in the Old Port after midnight having consumed only 2 beers and minding your own business … head back to your cottage immediately!

If you do need our services in the ED, trust that we will treat you with the same care as we do our own family, including Uncle Vern, who visits us during the summer. Like our relatives we are most happy when you first arrive and then again when you are heading south again on the Pike, and life once again becomes the way it should be.

Congratulations Dr. Andy Perron

Dr. Perron, the residency directory of the Emergency Medicine program at Maine Medical Center, received the announcement that he would receive the national ACEP educational speaker of the year award at the Scientific Assembly this October in Seattle. This award is designed to recognize a single faculty member who has consistently demonstrated teaching excellence through performance, versatility, and dependability during ACEP educational meetings throughout the year. Great job!

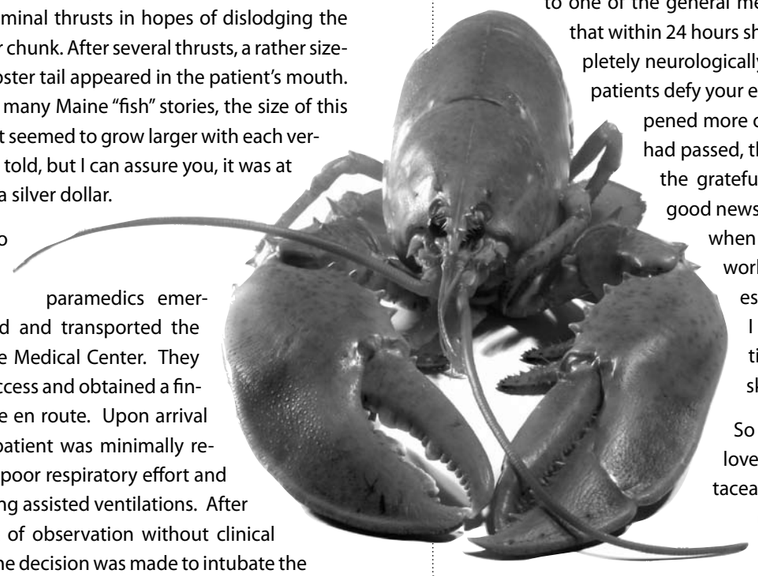
A Lobster Tale

Tripp Carter, MD, PGY-3, Maine Medical Center

Perhaps only during the summer in Maine can one find a tale of hypoxemic respiratory failure and lobster. It was a typical June day and Mrs. X was out for lunch with her son. Like any good native Mainah, she ordered the lobster roll lunch special. Not but fifteen minutes later and the call went out to Portland EMS for an elderly lady in respiratory distress. When paramedics arrived on scene, they found an apneic and unresponsive elderly female. Her son quickly informed the paramedics that his mother had been choking on a piece of lobster and after several attempts of the Heimlich maneuver, she had gone limp and slumped to the floor. After a quick examination of the patients' oropharynx, an oral airway was placed and BVM ventilation initiated. Attempts to ventilate the patient were unsuccessful as the piece of lobster was completely occluding the patient's airway. Recognizing the dire nature of the situation, the paramedic team attempted several abdominal thrusts in hopes of dislodging the wayward lobster chunk. After several thrusts, a rather sizeable piece of lobster tail appeared in the patient's mouth. Now, not unlike many Maine "fish" stories, the size of this lobster fragment seemed to grow larger with each version of the story told, but I can assure you, it was at least the size of a silver dollar.

Now able to ventilate the patient, the paramedics emergently packaged and transported the patient to Maine Medical Center. They established IV access and obtained a finger-stick glucose en route. Upon arrival to the ED, the patient was minimally responsive with a poor respiratory effort and requiring ongoing assisted ventilations. After several minutes of observation without clinical improvement, the decision was made to intubate the patient. The patient's airway was secured without incident with a pair of McGill forceps at the bedside in anticipation of perhaps more wayward lobster fragments still waiting to be discovered. After further discussion with the pre-hospital team, it was estimated that the patient went without oxygen for a period of 3-4 minutes. Such an extended period of hypoxia placed the patient at high risk of a significant hypoxic brain injury. And the patient's advanced age left little physiologic reserve to handle such a severe stress. We assumed the worse and informed the patient's family that her prognosis was indeed quite poor.

Two days later, while working another busy evening shift, one of the paramedics involved in this case stopped me and asked if I knew how the patient was doing. Together we looked her up in the hospital computer system, half expecting the worst, but hopeful for some sign that she was doing well. I could not believe my eyes when I saw that she was no longer on the ventilator and had been transferred to one of the general medical floors. I later found out that within 24 hours she had woken up and was completely neurologically intact. It is always nice when patients defy your expectations. I only wish it happened more often. After our initial disbelief had passed, the paramedic and I exchanged the grateful grins that often accompany good news. It was one of those moments when you realize why you chose to work in emergency medical services. And although never stated, I hope he realized that the patient was alive because of his skills and training that day.



So let this be a lesson to all you lovers of lobster. The red crustaceans sure are tasty, but please don't bite off more than you can chew!

THE RESIDENTS CORNER

ERIC LOWE, MD, CHIEF RESIDENT
MAINE MEDICAL CENTER EMERGENCY MEDICINE

As residents we quickly learn that no matter where we work in Emergency Medicine, one of the constants of the job is the close relationship we get to develop with local EMS services. Here at Maine Medical Center, as the only Emergency Medicine residency in Maine, our resident group is lucky to train with (and be trained by) some of the best EMS providers available. The nature of Maine's environment and our locale means we have the opportunity to interact on a daily basis with a range of providers from the career paramedics in downtown Portland, to some of the small volunteer services from more distant areas, yet despite the differences in case load, funding, or experience, there is a uniform dedication, resourcefulness, and caring in this group which is continuously a pleasure to interact with.

Briefly polling the residents brings a flurry of reports of specific cases where the EMS crews delivered amazing saves to our trauma-resuscitation rooms or of other specific cases noteworthy for their interesting pre-hospital twists handled in stride by the local crews. I still remember one case, soon after moving from Southern New England to begin residency, of a patient who had suffered chest pain while in the backcountry. I was stunned to hear that he had paddled across a lake, called EMS, and then drove to meet them one and a half hours away. He then promptly coded in the back of the rig shortly after they met up, yet despite a transport time of greater than two hours over dirt logging roads, the crew delivered him with a pulse and he survived to make it by helicopter down to our ICU later in the night. I realized then that the men and women of Maine EMS were dealing with a different set of challenges then I faced when I spent time as an EMT outside of Boston.

Whether braving the extremes of Maine's weather or the hazards of a local household, the EMS crews we have the pleasure of working with and training alongside routinely go above and beyond in their day to day work.

Save the Dates

OCTOBER

Oct 1	Difficult Airway Lab-MGMC Seton. Contact KVEMS 877-0936.
Oct 2, 9, 16, 23, 30	Maine EMS 12-Lead EKG Standards Program. Contact 492-1624.
Oct 11	Regional Education Committee @ 11:30 am KVEMS. Contact 877-0936.
Oct 11, 12	ALS BLS PEPP KVCC Fairfield. Contact KVEMS 877-0936.
Oct 25	PHTLS Recert KVCC Fairfield. Contact KVEMS 877-0936.
Oct 25, 26	PHTLS Provider KVCC Fairfield. Contact KVEMS 877-0936.
Oct 26	CISM Group/Team Training MGMC-Thayer. Contact KVEMS 877-0936.
Oct 27	ALS Topics and Skills Review KVCC Fairfield. Contact KVEMS 877-0936.

NOVEMBER

Nov 7-11	Mid Coast EMS Conference. Contact 785-5000.
Nov 16	ALS BLS PEPP KVCC Fairfield. Contact KVEMS 877-0936.
Nov 16, 17, 18	BLS Refresher –Location TBA. Contact KVEMS 877-0936.
Nov 16	Difficult Airway Lab KVCC Fairfield. Contact KVEMS 877-0936.
Nov 30	PHTLS Recert KVCC Fairfield. Contact KVEMS 877-0936.
Nov 3, Dec 1	PHTLS Provider KVCC Fairfield. Contact KVEMS 877-0936.

DECEMBER

Dec 10	MGMC Augusta Run Review 6 pm Conf Rm 6. Contact KVEMS 877-0936.
Dec 12	MGMC Thayer Run Review 6pm. Contact KVEMS 877-0936.
Dec 13	Regional Education Committee @ KVEMSC 11:30 am. Contact 877-0936.
Dec 18	SVH Run Review 6 pm. Contact KVEMS 877-0936.

Photo by Cathy Case

Maine EMS Memorial Update

We're Rounding the Corner!

After nearly three years of planning, legislative process, and negotiations with State government agencies, the Maine EMS Memorial Project has entered its final phase: fund-raising and construction. The design for the Memorial was unveiled last May, at the Maine EMS Week awards ceremony at the State House.

"a permanent tribute to the Maine EMS system, and all the players in it, past and present."

- Kevin McGinnis

That was a fitting juncture for the unveiling because the Memorial, which will be located between the Fire and Police Memorials on the Capitol grounds, is intended to be a dynamic public testimonial, honoring the entire system.

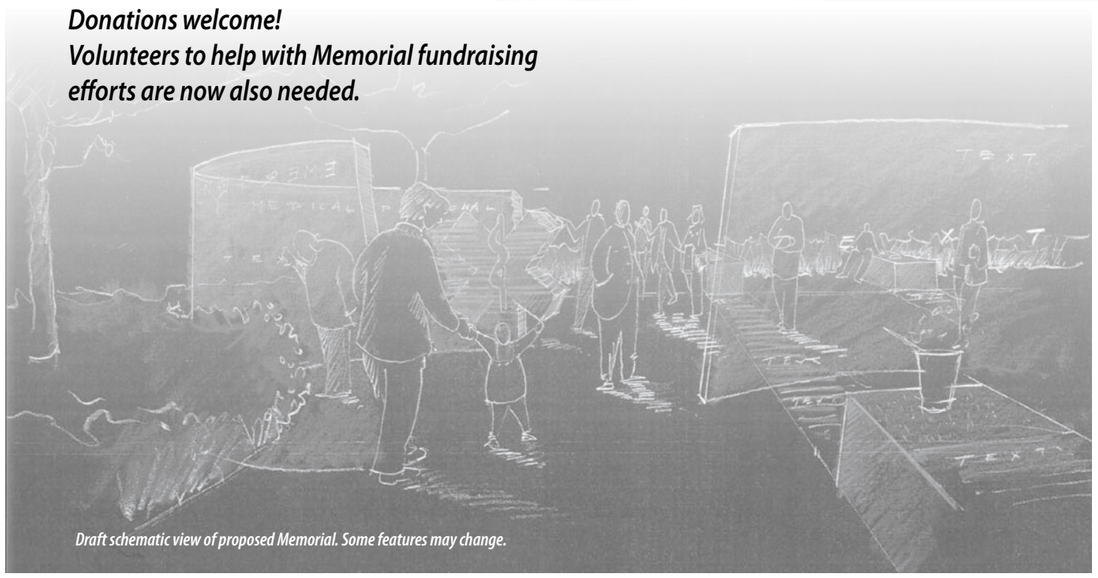
"At its foundation, our vision of the Memorial is as a tribute to the Maine Emergency Medical Services System, and all the players in it, past and present," says Kevin McGinnis, Chair of the Memorial Project Committee. It will serve as a permanent recognition of those who have lost their lives in the course of their EMS duty, EMS system leaders, and especially everyone who works in the system everyday.

Accordingly, three different kinds of markers are planned to honor these individuals, and to educate the public about their contributions. An audio component will enable visitors to learn more at each marker site by listening, via cell phone or other technology, to detailed descriptions and personal accounts.

Led by the project's originator, former state EMS director, Kevin McGinnis, the Project Committee members are Winthrop EMT Cynthia Thompson, NorthStar EMT-I Carla DeGraw, and regional coordinator, Rick Petrie. In its legislative phase, the committee also included Representatives John Tuttle and Terrence McKenney, both EMTs.

If you would like to be part of the fundraising team, or to make a donation, please contact Rick Petrie at rpetrie@kvems.org.

Donations welcome!
Volunteers to help with Memorial fundraising efforts are now also needed.



Draft schematic view of proposed Memorial. Some features may change.

Photo by Nancy McGinnis

Cardiac arrest survivor, Debbie Demosthenes, speaks at the 2007 EMS Awards ceremony.

Photo by Diane Delano

Poland Fire Rescue Memory Garden—The memory garden is maintained by members of the squad with donations made to the organization in memory of a loved one.

Portland Jetport Disaster Simulation

Photos of Portland and South Portland EMS personnel provided by Mark Belserene

Central Maine Power Ad

Provided by printers

MAINE EMS TEAM LEADERS

Ever wondered who to call when you have a question, complaint, concern or compliment about your EMS system? Listed below are the members of the Maine EMS Board, Maine EMS Staff, and the Regional Coordinators and Medical Directors. Each and every EMS team member in Maine is encouraged to get involved with how your system is run. So get involved—give us a call!

Maine EMS Board Members

Southern Maine EMS Rep	Ron Jones, EMT-P	23 Sterling Drive, Westbrook, ME 04092	TEL: 854-0654
Kennebec Valley EMS Rep	Tim Beals, EMT-P	PO Box 747, Waterville, ME 04903	TEL: 872-4000
Aroostook EMS Rep	James McKenney, EMT-P	229 State Street, Presque Isle, ME 04769	TEL: 768-4388
Tri-County EMS Rep	Rebecca Chagrasulis, MD	PO Box 120, Casco, ME 04015	TEL: 743-5933
Northeastern EMS Rep	Paul Knowlton, EMT-P	274 Pearl Street, Bangor, ME 04401	TEL: 941-5100
Mid-Coast EMS Rep	Steven E. Leach, EMT-P	PO Box 894, Union, ME 04862	TEL: 785-2260
Physician Rep	Peter DiPietrantonio, DO	4 Picnic Hill Road, Freeport, ME 04032	TEL: 373-2220
Nurse Rep	Bill Montejo, RN, EMT-P	363 River Road, Bowdoinham, ME 04008	TEL: 666-3093
First Responder Service	Richard Doughty, EMT-P	4153 Union Street, Levant, ME 04456	TEL: 941-5900
For Profit Service	Joseph Conley, EMT-P	11 Deer Hill Avenue, Standish, ME 04084	TEL: 642-5854
Not For Profit Service	Carol Pillsbury, EMT-P	PO Box 200, West Farmington, ME 04992	TEL: 778-6951
State Medical Control Director	Steven E. Diaz, MD	Maine EMS, 152 State House Station, Augusta, ME 04333	
Hospital Rep	VACANT		
Municipal EMS Service Rep	Wayne Werts, EMT-P, Chief	Auburn Fire Department, 550 Minot Avenue, Auburn, ME 04210	TEL: 783-6931
Fire Chief Rep	Roy Woods, Chief	Caribou Fire Department	
Public Rep	VACANT		
Public Rep	Oden F. Cassidy	RR 2, Box 960, Houlton, ME 04732	TEL: 532-3941

Maine EMS State Office Staff

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Ben Woodard, EMT
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ben.woodard@maine.gov

Karen Cutler
Administrative Assistant
karen.m.cutler@maine.gov

Regional Coordinators and Medical Directors

REGION 1 — Donnell Carroll, Southern Maine EMS Council — Dr. Anthony Bock, Medical Director
496 Ocean Street, South Portland, ME 04106
TEL: 741-2790 | FAX: 741-2158 | smems@smems.org

REGION 2 — Joanne LeBrun, Tri-County EMS Council — Dr. Kevin Kendall, Medical Director
300 Main Street, Lewiston, ME 04240
TEL: 795-2880 | FAX: 753-7280 | lebrunj@cmhc.org

REGION 3 — Rick Petrie, EMT-P, KVEMS Council — Dr. Douglas Boyink, Interim Medical Director
71 Halifax Street, Winslow, ME 04901
TEL: 877-0936 | FAX: 872-2753 | office@kvems.org

REGION 4 — Rick Petrie, EMT-P, Northeastern Maine EMS — Dr. Jonnathan Busko, Interim Medical Director
EMCC, 354 Hogan Road, Bangor, ME 04401
TEL: 974-4880 | FAX: 974-4879 | neems@emcc.org

REGION 5 — Steve Corbin, Aroostook Maine EMS — Dr. Jay Reynolds, Medical Director
111 High Street, Caribou, ME 04736
TEL: 492-1624 | FAX: 492-0342 | aems@mfx.net

REGION 6 — Bill Zito, Mid-Coast EMS — Dr. David Ettinger, Medical Director
Thompson Community Center
Routes 131 and 17, PO Box 610, Union, ME 04862
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Published quarterly for the Maine Emergency Nurses Association, the Regional EMS Councils, Maine Chapter of the American College of Emergency Physicians, Maine Committee on Trauma, Maine Ambulance Association and the State of Maine EMS

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